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GQB E.S. - 03C0  
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ATTORNEY DOCKET NO. NANF.P-008  
PATENT APPLICATION  
March 13, 2003

IN THE INTERNATIONAL RECEIVING OFFICE

Applicant : Makowski  
Serial No. : 10/080,608  
Filing Date : 02/21/02  
Title : Staged Assembly of Nanostructures

STATEMENT REGARDING SEQUENCE LISTING

Responding to a Notice to Comply with Requirements for Patent Applications Containing Nucleotide Sequence and/or Amino Acid Sequence Disclosures mailed November 13, 2002, the Applicants submit a paper copy of the Sequence Listing and a diskette containing said Sequence Listing. Please insert the Sequence Listing in the appropriate location in the file. Applicants request a two month extension of time for providing such information and enclose a Patent Office Form 2038 authorizing the charge for a two month extension.

The undersigned hereby certifies that the enclosed paper copy of the Sequence Listing and the enclosed computer readable form have the same content.

DATE: March 13, 2003

Respectfully submitted,

OPPEDAHL & LARSON LLP

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I hereby certify that this paper and the attachments named herein are being deposited with Federal Express in an envelope addressed to the Assistant Commissioner for Patents, U.S. Patents and Trademarks Office, 2011 South Clark Place, Customer Window, Box , Crystal Plaza Two, Lobby, Room 1B03, Arlington, VA 22202 on March 13, 2003

3/13/03  
Date

Linda L. Orr



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## SEQUENCE LISTING

<110> Makowski, Lee  
Hyman, Paul  
Williams, Mark

<120> STAGED ASSEMBLY OF NANOSTRUCTURES

<130> 8471-010-999

<140> 10/080,608  
<141> 2002-02-21

<160> 180

<170> FastSEQ for Windows Version 4.0

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<212> PRT  
<213> *Saccharomyces cerevisiae*

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His Leu Glu Asn Glu Val Ala Arg Leu Lys Lys Leu  
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<212> PRT  
<213> Unknown

<220>  
<223> Probable variant of homo sapiens protein.

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Ala Leu Gln Thr Glu Ile Ala Asn Leu Leu Lys Glu  
20 25

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<212> PRT  
<213> Unknown

<220>  
<223> Probable variant of homo sapiens protein.

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Glu Leu Ala Ser Thr Ala Asn Met Leu Arg Glu Gln  
20 25

<210> 4  
<211> 35  
<212> PRT  
<213> Mus musculus

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Gln Leu Gln Lys Lys Leu Ser Thr Leu Ser Arg Glu Phe Lys Gln Leu  
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Arg Asn Leu  
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<210> 5  
<211> 35  
<212> PRT  
<213> Homo sapiens

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Ser Leu Lys Glu Arg Ile Gln Tyr Leu Ala Lys Glu Ile Glu Glu Val  
20 25 30  
Lys Asp Leu  
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<212> PRT  
<213> Homo sapiens

<220>  
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<223> Xaa = Any Amino Acid

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Xaa

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Xaa

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<213> Unknown

<220>

<223> Probable variant of Mus musculus protein

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<210> 9

<211> 33

<212> PRT

<213> Schizosaccharomyces pombe

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Lys

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<212> PRT

<213> Mus musculus

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Val Ala Arg Glu Ile Gln Tyr Leu Asp Glu Val Leu Glu Ala Asn Cys  
50 55 60

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Cys Asp Ser Ser Val Asp Gly Thr Tyr Asn Gly Ile Ser Ser Pro Glu  
 65 70 75 80  
 Pro Gly Ala Ala Ile Leu Val Ser Ser Leu Gly Ser Pro Ala His Ser  
 85 90 95  
 Val Thr Glu Ala Glu Pro Thr Glu Lys Ala Ser Gly Arg Gln Val Pro  
 100 105 110  
 Pro His Ile Glu Leu Ser Arg Ile Pro Ser Asp Arg Met Ala Glu Gly  
 115 120 125  
 Glu Arg Ala Asn Gly His Ser Thr Asp Gln Pro Gln Asp Leu Leu Gly  
 130 135 140  
 Asn Ser Leu Gln Ala Pro Ala Ser Pro Ser Ser Thr Ser Ser His  
 145 150 155 160  
 Cys Ser Ser Arg Asp Gly Glu Phe Thr Leu Thr Thr Leu Lys Lys Glu  
 165 170 175  
 Ala Lys Phe Glu Leu Arg Ala Phe His Glu Asp Lys Lys Pro Ser Lys  
 180 185 190  
 Leu Phe Glu Glu Asp Glu Arg Glu Lys Glu Gln Phe Cys Val Arg Lys  
 195 200 205  
 Val Arg Pro Ser Glu Glu Met Ile Glu Leu Glu Lys Glu Arg Arg Glu  
 210 215 220  
 Leu Ile Arg Ser Gln Ala Val Lys Lys Asn Pro Gly Ile Ala Ala Lys  
 225 230 235 240  
 Trp Trp Asn Pro Pro Gln Glu Lys Thr Ile Glu Glu Gln Leu Asp Glu  
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 Glu His Leu Glu Ser His Arg Arg Tyr Lys Glu Arg Lys Glu Lys Arg  
 260 265 270  
 Ala Gln Gln Glu Gln Leu Gln Leu Gln Gln Gln Gln Gln Gln Leu  
 275 280 285  
 Gln Gln Gln Leu Gln Gln Gln Leu Gln Gln Gln Gln Gln Leu Gln  
 290 295 300  
 Gln Gln Leu Gln Gln Gln Leu Ser Thr Ser Gln Pro Cys Thr Ala  
 305 310 315 320  
 Pro Ala Ala His Lys His Leu Asp Gly Ile Glu His Thr Lys Glu Asp  
 325 330 335  
 Val Val Thr Glu Gln Ile Asp Phe Ser Ala Ala Arg Lys Gln Phe Gln  
 340 345 350  
 Leu Met Glu Asn Ser Arg Gln Thr Leu Ala Lys Gly Gln Ser Thr Pro  
 355 360 365  
 Arg Leu Phe Ser Ile Lys Pro Tyr Tyr Lys Pro Leu Gly Ser Ile His  
 370 375 380  
 Ser Asp Lys Pro Pro Thr Ile Leu Arg Pro Ala Thr Val Gly Gly Thr  
 385 390 395 400  
 Leu Glu Asp Gly Gly Thr Gln Ala Ala Lys Glu Gln Lys Ala Pro Cys  
 405 410 415  
 Val Ser Glu Ser Gln Ser Ala Gly Ala Gly Pro Ala Asn Ala Ala Thr  
 420 425 430  
 Gln Gly Lys Glu Gly Pro Tyr Ser Glu Pro Ser Lys Arg Gly Pro Leu  
 435 440 445  
 Ser Lys Leu Trp Ala Glu Asp Gly Glu Phe Thr Ser Ala Arg Ala Val  
 450 455 460  
 Leu Thr Val Val Lys Asp Glu Asp His Gly Ile Leu Asp Gln Phe Ser  
 465 470 475 480  
 Arg Ser Val Asn Val Ser Leu Thr Gln Glu Leu Asp Ser Gly Leu

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485	490	495
Asp Glu Leu Ser Val Arg Ser Gln Asp Thr Thr Val Leu Glu Thr Leu		
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Ser Asn Asp Phe Ser Met Asp Asn Ile Ser Asp Ser Gly Ala Ser Asn		
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Glu Thr Thr Ser Ala Leu Gln Glu Asn Ser Leu Ala Asp Phe Ser Leu		
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Pro Gln Thr Pro Gln Thr Asp Asn Pro Ser Glu Gly Arg Glu Gly Val		
545	550	555
Ser Lys Ser Phe Ser Asp His Gly Phe Tyr Ser Pro Ser Ser Thr Leu		
565	570	575
Gly Asp Ser Pro Ser Val Asp Asp Pro Leu Glu Tyr Gln Ala Gly Leu		
580	585	590
Leu Val Gln Asn Ala Ile Gln Gln Ala Ile Ala Glu Gln Val Asp Lys		
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Ala Glu Ala His Thr Ser Lys Glu Gly Ser Glu Gln Gln Glu Pro Glu		
610	615	620
Ala Thr Val Glu Glu Ala Gly Ser Gln Thr Pro Gly Ser Glu Lys Pro		
625	630	635
Gln Gly Met Phe Ala Pro Pro Gln Val Ser Ser Pro Val Gln Glu Lys		
645	650	655
Arg Asp Ile Leu Pro Lys Asn Leu Pro Ala Glu Asp Arg Ala Leu Arg		
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Glu Lys Gly Pro Ser Gln Pro Pro Thr Ala Ala Gln Pro Ser Gly Pro		
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Val Asn Met Glu Glu Thr Arg Pro Glu Gly Gly Tyr Phe Ser Lys Tyr		
690	695	700
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705	710	715
Glu Ser Asp Val Met Val Gly Pro Phe Lys Leu Arg Ser Arg Lys Gln		
725	730	735
Arg Thr Leu Ser Met Ile Glu Glu Glu Ile Arg Ala Ala Gln Glu Arg		
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Glu Glu Glu Leu Lys Arg Gln Arg Gln Val Arg Gln Ser Thr Pro Ser		
755	760	765
Pro Arg Ala Lys Asn Ala Pro Ser Leu Pro Ser Arg Thr Thr Cys Tyr		
770	775	780
Lys Thr Ala Pro Gly Lys Ile Glu Lys Val Lys Pro Pro Pro Ser Pro		
785	790	795
800		
Thr Thr Glu Gly Pro Ser Leu Gln Pro Asp Leu Ala Pro Glu Glu Ala		
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Ala Gly Thr Gln Arg Pro Lys Asn Leu Met Gln Thr Leu Met Glu Asp		
820	825	830
Tyr Glu Thr His Lys Ser Lys Arg Arg Glu Arg Met Asp Asp Ser Ser		
835	840	845
Tyr Thr Ser Lys Leu Leu Ser Cys Lys Val Thr Ser Glu Val Leu Glu		
850	855	860
Ala Thr Arg Val Asn Arg Arg Lys Ser Ala Ser Gly Leu Ala Leu Gly		
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Gly Arg Asp Leu Arg		
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&lt;211&gt; 3878

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 11

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 Arg Gln Arg Lys Ala Gln Ser Asp Gly Gln Ser Pro Ser Lys Lys Gln  
 35 40 45  
 Lys Lys Lys Arg Lys Thr Ser Ser Ser Lys His Asp Val Ser Ala His  
 50 55 60  
 His Asp Leu Asn Ile Asp Gln Ser Gln Cys Asn Glu Met Tyr Ile Asn  
 65 70 75 80  
 Ser Ser Gln Arg Val Glu Ser Thr Val Ile Pro Glu Ser Thr Ile Met  
 85 90 95  
 Arg Thr Leu His Ser Gly Glu Ile Thr Ser His Glu Gln Gly Phe Ser  
 100 105 110  
 Val Glu Leu Glu Ser Glu Ile Ser Thr Thr Ala Asp Asp Cys Ser Ser  
 115 120 125  
 Glu Val Asn Gly Cys Ser Phe Val Met Arg Thr Gly Lys Pro Thr Asn  
 130 135 140  
 Leu Leu Arg Glu Glu Glu Phe Gly Val Asp Asp Ser Tyr Ser Glu Gln  
 145 150 155 160  
 Gly Ala Gln Asp Ser Pro Thr His Leu Glu Met Met Glu Ser Glu Leu  
 165 170 175  
 Ala Gly Lys Gln His Glu Ile Glu Glu Leu Asn Arg Glu Leu Glu Glu  
 180 185 190  
 Met Arg Val Thr Tyr Gly Thr Glu Gly Leu Gln Gln Leu Gln Glu Phe  
 195 200 205  
 Glu Ala Ala Ile Lys Gln Arg Asp Gly Ile Ile Thr Gln Leu Thr Ala  
 210 215 220  
 Asn Leu Gln Gln Ala Arg Arg Glu Lys Asp Glu Thr Met Arg Glu Phe  
 225 230 235 240  
 Leu Glu Leu Thr Glu Gln Ser Gln Lys Leu Gln Ile Gln Phe Gln Gln  
 245 250 255  
 Leu Gln Ala Ser Glu Thr Leu Arg Asn Ser Thr His Ser Ser Thr Ala  
 260 265 270  
 Ala Asp Leu Leu Gln Ala Lys Gln Gln Ile Leu Thr His Gln Gln Gln  
 275 280 285  
 Leu Glu Glu Gln Asp His Leu Leu Glu Asp Tyr Gln Lys Lys Lys Glu  
 290 295 300  
 Asp Phe Thr Met Gln Ile Ser Phe Leu Gln Glu Lys Ile Lys Val Tyr  
 305 310 315 320  
 Glu Met Glu Gln Asp Lys Lys Val Glu Asn Ser Asn Lys Glu Glu Ile  
 325 330 335  
 Gln Glu Lys Glu Thr Ile Ile Glu Glu Leu Asn Thr Lys Ile Ile Glu  
 340 345 350  
 Glu Glu Lys Lys Thr Leu Glu Leu Lys Asp Lys Leu Thr Thr Ala Asp  
 355 360 365  
 Lys Leu Leu Gly Glu Leu Gln Glu Gln Ile Val Gln Lys Asn Gln Glu  
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Ile Lys Asn Met Lys Leu Glu Leu Thr Asn Ser Lys Gln Lys Glu Arg  
 385 390 395 400  
 Gln Ser Ser Glu Glu Ile Lys Gln Leu Met Gly Thr Val Glu Glu Leu  
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 Gln Lys Arg Asn His Lys Asp Ser Gln Phe Glu Thr Asp Ile Val Gln  
 420 425 430  
 Arg Met Glu Gln Glu Thr Gln Arg Lys Leu Glu Gln Leu Arg Ala Glu  
 435 440 445  
 Leu Asp Glu Met Tyr Gly Gln Gln Ile Val Gln Met Lys Gln Glu Leu  
 450 455 460  
 Ile Arg Gln His Met Ala Gln Met Glu Glu Met Lys Thr Arg His Lys  
 465 470 475 480  
 Gly Glu Met Glu Asn Ala Leu Arg Ser Tyr Ser Asn Ile Thr Val Asn  
 485 490 495  
 Glu Asp Gln Ile Lys Leu Met Asn Val Ala Ile Asn Glu Leu Asn Ile  
 500 505 510  
 Lys Leu Gln Asp Thr Asn Ser Gln Lys Glu Lys Leu Lys Glu Glu Leu  
 515 520 525  
 Gly Leu Ile Leu Glu Glu Lys Cys Ala Leu Gln Arg Gln Leu Glu Asp  
 530 535 540  
 Leu Val Glu Glu Leu Ser Phe Ser Arg Glu Gln Ile Gln Arg Ala Arg  
 545 550 555 560  
 Gln Thr Ile Ala Glu Gln Glu Ser Lys Leu Asn Glu Ala His Lys Ser  
 565 570 575  
 Leu Ser Thr Val Glu Asp Leu Lys Ala Glu Ile Val Ser Ala Ser Glu  
 580 585 590  
 Ser Arg Lys Glu Leu Glu Leu Lys His Glu Ala Glu Val Thr Asn Tyr  
 595 600 605  
 Lys Ile Lys Leu Glu Met Leu Glu Lys Glu Lys Asn Ala Val Leu Asp  
 610 615 620  
 Arg Met Ala Glu Ser Gln Glu Ala Glu Leu Glu Arg Leu Arg Thr Gln  
 625 630 635 640  
 Leu Leu Phe Ser His Glu Glu Glu Leu Ser Lys Leu Lys Glu Asp Leu  
 645 650 655  
 Glu Ile Glu His Arg Ile Asn Ile Glu Lys Leu Lys Asp Asn Leu Gly  
 660 665 670  
 Ile His Tyr Lys Gln Gln Ile Asp Gly Leu Gln Asn Glu Met Ser Gln  
 675 680 685  
 Lys Ile Glu Thr Met Gln Phe Glu Lys Asp Asn Leu Ile Thr Lys Gln  
 690 695 700  
 Asn Gln Leu Ile Leu Glu Ile Ser Lys Leu Lys Asp Leu Gln Gln Ser  
 705 710 715 720  
 Leu Val Asn Ser Lys Ser Glu Glu Met Thr Leu Gln Ile Asn Glu Leu  
 725 730 735  
 Gln Lys Glu Ile Glu Ile Leu Arg Gln Glu Glu Lys Glu Lys Gly Thr  
 740 745 750  
 Leu Glu Gln Glu Val Gln Glu Leu Gln Leu Lys Thr Glu Leu Leu Glu  
 755 760 765  
 Lys Gln Met Lys Glu Lys Glu Asn Asp Leu Gln Glu Lys Phe Ala Gln  
 770 775 780  
 Leu Glu Ala Glu Asn Ser Ile Leu Lys Asp Glu Lys Lys Thr Leu Glu  
 785 790 795 800  
 Asp Met Leu Lys Ile His Thr Pro Val Ser Gln Glu Glu Arg Leu Ile

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805	810	815
Phe Leu Asp Ser Ile Lys Ser Lys Ser Lys Asp Ser Val Trp Glu Lys		
820	825	830
Glu Ile Glu Ile Leu Ile Glu Glu Asn Glu Asp Leu Lys Gln Gln Cys		
835	840	845
Ile Gln Leu Asn Glu Glu Ile Glu Lys Gln Arg Asn Thr Phe Ser Phe		
850	855	860
Ala Glu Lys Asn Phe Glu Val Asn Tyr Gln Glu Leu Gln Glu Glu Tyr		
865	870	875
Ala Cys Leu Leu Lys Val Lys Asp Asp Leu Glu Asp Ser Lys Asn Lys		
885	890	895
Gln Glu Leu Glu Tyr Lys Ser Lys Leu Lys Ala Leu Asn Glu Glu Leu		
900	905	910
His Leu Gln Arg Ile Asn Pro Thr Thr Val Lys Met Lys Ser Ser Val		
915	920	925
Phe Asp Glu Asp Lys Thr Phe Val Ala Glu Thr Leu Glu Met Gly Glu		
930	935	940
Val Val Glu Lys Asp Thr Thr Glu Leu Met Glu Lys Leu Glu Val Thr		
945	950	955
Lys Arg Glu Lys Leu Glu Leu Ser Gln Arg Leu Ser Asp Leu Ser Glu		
965	970	975
Gln Leu Lys Gln Lys His Gly Glu Ile Ser Phe Leu Asn Glu Glu Val		
980	985	990
Lys Ser Leu Lys Gln Glu Lys Glu Gln Val Ser Leu Arg Cys Arg Glu		
995	1000	1005
Leu Glu Ile Ile Ile Asn His Asn Arg Ala Glu Asn Val Gln Ser Cys		
1010	1015	1020
Asp Thr Gln Val Ser Ser Leu Leu Asp Gly Val Val Thr Met Thr Ser		
1025	1030	1035
Arg Gly Ala Glu Gly Ser Val Ser Lys Val Asn Lys Ser Phe Gly Glu		
1045	1050	1055
Glu Ser Lys Ile Met Val Glu Asp Lys Val Ser Phe Glu Asn Met Thr		
1060	1065	1070
Val Gly Glu Glu Ser Lys Gln Glu Gln Leu Ile Leu Asp His Leu Pro		
1075	1080	1085
Ser Val Thr Lys Glu Ser Ser Leu Arg Ala Thr Gln Pro Ser Glu Asn		
1090	1095	1100
Asp Lys Leu Gln Lys Glu Leu Asn Val Leu Lys Ser Glu Gln Asn Asp		
1105	1110	1115
Leu Arg Leu Gln Met Glu Ala Gln Arg Ile Cys Leu Ser Leu Val Tyr		
1125	1130	1135
Ser Thr His Val Asp Gln Val Arg Glu Tyr Met Glu Asn Glu Lys Asp		
1140	1145	1150
Lys Ala Leu Cys Ser Leu Lys Glu Glu Leu Ile Phe Ala Gln Glu Glu		
1155	1160	1165
Lys Ile Lys Glu Leu Gln Lys Ile His Gln Leu Glu Leu Gln Thr Met		
1170	1175	1180
Lys Thr Gln Glu Thr Gly Asp Glu Gly Lys Pro Leu His Leu Leu Ile		
1185	1190	1195
Gly Lys Leu Gln Lys Ala Val Ser Glu Glu Cys Ser Tyr Phe Leu Gln		
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Thr Leu Cys Ser Val Leu Gly Glu Tyr Tyr Thr Pro Ala Leu Lys Cys		
1220	1225	1230

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Glu Val Asn Ala Glu Asp Lys Glu Asn Ser Gly Asp Tyr Ile Ser Glu  
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 Asn Glu Asp Pro Glu Leu Gln Asp Tyr Arg Tyr Glu Val Gln Asp Phe  
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 Gln Glu Asn Met His Thr Leu Leu Asn Lys Val Thr Glu Glu Tyr Asn  
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 Lys Leu Leu Val Leu Gln Thr Arg Leu Ser Lys Ile Trp Gly Gln Gln  
   1285               1290               1295  
 Thr Asp Gly Met Lys Leu Glu Phe Gly Glu Glu Asn Leu Pro Lys Glu  
   1300               1305               1310  
 Glu Thr Glu Phe Leu Ser Ile His Ser Gln Met Thr Asn Leu Glu Asp  
   1315               1320               1325  
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 Lys Thr Lys Leu Glu Glu Gln Val Gln Glu Leu Glu Ser Leu Ile Ser  
   1345               1350               1355               1360  
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   1365               1370               1375  
 Ile His Cys Leu Gln Lys Arg Leu Gln Ala Val Ser Glu Ser Thr Val  
   1380               1385               1390  
 Pro Pro Ser Leu Pro Val Asp Ser Val Val Ile Thr Glu Ser Asp Ala  
   1395               1400               1405  
 Gln Arg Thr Met Tyr Pro Gly Ser Cys Val Lys Lys Asn Ile Asp Gly  
   1410               1415               1420  
 Thr Ile Glu Phe Ser Gly Glu Phe Gly Val Lys Glu Glu Thr Asn Ile  
   1425               1430               1435               1440  
 Val Lys Leu Leu Glu Lys Gln Tyr Gln Glu Gln Leu Glu Glu Val  
   1445               1450               1455  
 Ala Lys Val Ile Val Ser Met Ser Ile Ala Phe Ala Gln Gln Thr Glu  
   1460               1465               1470  
 Leu Ser Arg Ile Ser Gly Gly Lys Glu Asn Thr Ala Ser Ser Lys Gln  
   1475               1480               1485  
 Ala His Ala Val Cys Gln Gln Glu Gln His Tyr Phe Asn Glu Met Lys  
   1490               1495               1500  
 Leu Ser Gln Asp Gln Ile Gly Phe Gln Thr Phe Glu Thr Val Asp Val  
   1505               1510               1515               1520  
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   1525               1530               1535  
 Gly Lys Glu Ile Leu Leu Ser Asn Ser Asp Pro His Asp Ile Pro Glu  
   1540               1545               1550  
 Ser Lys Asp Cys Val Leu Thr Ile Ser Glu Glu Met Phe Ser Lys Asp  
   1555               1560               1565  
 Lys Thr Phe Ile Val Arg Gln Ser Ile His Asp Glu Ile Ser Val Ser  
   1570               1575               1580  
 Ser Met Asp Ala Ser Arg Gln Leu Met Leu Asn Glu Glu Gln Leu Glu  
   1585               1590               1595               1600  
 Asp Met Arg Gln Glu Leu Val Arg Gln Tyr Gln Glu His Gln Gln Ala  
   1605               1610               1615  
 Thr Gln Arg Ser Ser Ile Asp Asn Glu Asn Leu Val Ser Glu Arg Glu  
   1620               1625               1630  
 Arg Val Leu Leu Glu Glu Leu Glu Ala Leu Lys Gln Leu Ser Leu Ala  
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 Gly Arg Glu Lys Leu Cys Cys Glu Leu Arg Asn Ser Ser Thr Gln Thr

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1650	1655	1660
Gln Asn Gly Asn Glu Asn Gln Gly Glu Val Glu Glu Gln Thr Phe Lys		
1665	1670	1675
Glu Lys Glu Leu Asp Arg Lys Pro Glu Asp Val Pro Pro Glu Ile Leu		1680
1685	1690	1695
Ser Asn Glu Arg Tyr Ala Leu Gln Lys Ala Asn Asn Arg Leu Leu Lys		
1700	1705	1710
Ile Leu Leu Glu Val Val Lys Thr Thr Ala Ala Val Glu Glu Thr Ile		
1715	1720	1725
Gly Arg His Val Leu Gly Ile Leu Asp Arg Ser Ser Lys Ser Gln Ser		
1730	1735	1740
Ser Ala Ser Leu Ile Trp Arg Ser Glu Ala Glu Ala Ser Val Lys Ser		
1745	1750	1755
Cys Val His Glu Glu His Thr Arg Val Thr Asp Glu Ser Ile Pro Ser		1760
1765	1770	1775
Tyr Ser Gly Ser Asp Met Pro Arg Asn Asp Ile Asn Met Trp Ser Lys		
1780	1785	1790
Val Thr Glu Glu Gly Thr Glu Leu Ser Gln Arg Leu Val Arg Ser Gly		
1795	1800	1805
Phe Ala Gly Thr Glu Ile Asp Pro Glu Asn Glu Glu Leu Met Leu Asn		
1810	1815	1820
Ile Ser Ser Arg Leu Gln Ala Ala Val Glu Lys Leu Leu Glu Ala Ile		
1825	1830	1835
Ser Glu Thr Ser Ser Gln Leu Glu His Ala Lys Val Thr Gln Thr Glu		1840
1845	1850	1855
Leu Met Arg Glu Ser Phe Arg Gln Lys Gln Glu Ala Thr Glu Ser Leu		
1860	1865	1870
Lys Cys Gln Glu Glu Leu Arg Glu Arg Leu His Glu Glu Ser Arg Ala		
1875	1880	1885
Arg Glu Gln Leu Ala Val Glu Leu Ser Lys Ala Glu Gly Val Ile Asp		
1890	1895	1900
Gly Tyr Ala Asp Glu Lys Thr Leu Phe Glu Arg Gln Ile Gln Glu Lys		
1905	1910	1915
Thr Asp Ile Ile Asp Arg Leu Glu Gln Glu Leu Leu Cys Ala Ser Asn		1920
1925	1930	1935
Arg Leu Gln Glu Leu Glu Ala Glu Gln Gln Ile Gln Glu Glu Arg		
1940	1945	1950
Glu Leu Leu Ser Arg Gln Lys Glu Ala Met Lys Ala Glu Ala Gly Pro		
1955	1960	1965
Val Glu Gln Gln Leu Leu Gln Glu Thr Glu Lys Leu Met Lys Glu Lys		
1970	1975	1980
Leu Glu Val Gln Cys Gln Ala Glu Lys Val Arg Asp Asp Leu Gln Lys		
1985	1990	1995
Gln Val Lys Ala Leu Glu Ile Asp Val Glu Glu Gln Val Ser Arg Phe		2000
2005	2010	2015
Ile Glu Leu Glu Gln Glu Lys Asn Thr Glu Leu Met Asp Leu Arg Gln		
2020	2025	2030
Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu Lys Met Arg Lys Phe Leu		
2035	2040	2045
Asp Glu Gln Ala Ile Asp Arg Glu His Glu Arg Asp Val Phe Gln Gln		
2050	2055	2060
Glu Ile Gln Lys Leu Glu Gln Gln Leu Lys Val Val Pro Arg Phe Gln		
2065	2070	2075
		2080

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Pro Ile Ser Glu His Gln Thr Arg Glu Val Glu Gln Leu Ala Asn His  
                   2085                 2090                 2095  
 Leu Lys Glu Lys Thr Asp Lys Cys Ser Glu Leu Leu Leu Ser Lys Glu  
                   2100                 2105                 2110  
 Gln Leu Gln Arg Asp Ile Gln Glu Arg Asn Glu Glu Ile Glu Lys Leu  
                   2115                 2120                 2125  
 Glu Phe Arg Val Arg Glu Leu Glu Gln Ala Leu Leu Val Ser Ala Asp  
                   2130                 2135                 2140  
 Thr Phe Gln Lys Val Glu Asp Arg Lys His Phe Gly Ala Val Glu Ala  
                   2145                 2150                 2155                 2160  
 Lys Pro Glu Leu Ser Leu Glu Val Gln Leu Gln Ala Glu Arg Asp Ala  
                   2165                 2170                 2175  
 Ile Asp Arg Lys Glu Lys Glu Ile Thr Asn Leu Glu Glu Gln Leu Glu  
                   2180                 2185                 2190  
 Gln Phe Arg Glu Glu Leu Glu Asn Lys Asn Glu Glu Val Gln Gln Leu  
                   2195                 2200                 2205  
 His Met Gln Leu Glu Ile Gln Lys Lys Glu Ser Thr Thr Arg Leu Gln  
                   2210                 2215                 2220  
 Glu Leu Glu Gln Glu Asn Lys Leu Phe Lys Asp Asp Met Glu Lys Leu  
                   2225                 2230                 2235                 2240  
 Gly Leu Ala Ile Lys Glu Ser Asp Ala Met Ser Thr Gln Asp Gln His  
                   2245                 2250                 2255  
 Val Leu Phe Gly Lys Phe Ala Gln Ile Ile Gln Glu Lys Glu Val Glu  
                   2260                 2265                 2270  
 Ile Asp Gln Leu Asn Glu Gln Val Thr Lys Leu Gln Gln Leu Lys  
                   2275                 2280                 2285  
 Ile Thr Thr Asp Asn Lys Val Ile Glu Glu Lys Asn Glu Leu Ile Arg  
                   2290                 2295                 2300  
 Asp Leu Glu Thr Gln Ile Glu Cys Leu Met Ser Asp Gln Glu Cys Val  
                   2305                 2310                 2315                 2320  
 Lys Arg Asn Arg Glu Glu Glu Ile Glu Gln Leu Asn Glu Val Ile Glu  
                   2325                 2330                 2335  
 Lys Leu Gln Gln Glu Leu Ala Asn Ile Gly Gln Lys Thr Ser Met Asn  
                   2340                 2345                 2350  
 Ala His Ser Leu Ser Glu Glu Ala Asp Ser Leu Lys His Gln Leu Asp  
                   2355                 2360                 2365  
 Val Val Ile Ala Glu Lys Leu Ala Leu Glu Gln Gln Val Glu Thr Ala  
                   2370                 2375                 2380  
 Asn Glu Glu Met Thr Phe Met Lys Asn Val Leu Lys Glu Thr Asn Phe  
                   2385                 2390                 2395                 2400  
 Lys Met Asn Gln Leu Thr Gln Glu Leu Phe Ser Leu Lys Arg Glu Arg  
                   2405                 2410                 2415  
 Glu Ser Val Glu Lys Ile Gln Ser Ile Pro Glu Asn Ser Val Asn Val  
                   2420                 2425                 2430  
 Ala Ile Asp His Leu Ser Lys Asp Lys Pro Glu Leu Glu Val Val Leu  
                   2435                 2440                 2445  
 Thr Glu Asp Ala Leu Lys Ser Leu Glu Asn Gln Thr Tyr Phe Lys Ser  
                   2450                 2455                 2460  
 Phe Glu Glu Asn Gly Lys Gly Ser Ile Ile Asn Leu Glu Thr Arg Leu  
                   2465                 2470                 2475                 2480  
 Leu Gln Leu Glu Ser Thr Val Ser Ala Lys Asp Leu Glu Leu Thr Gln  
                   2485                 2490                 2495  
 Cys Tyr Lys Gln Ile Lys Asp Met Gln Glu Gln Gly Gln Phe Glu Thr

## 8471-010 b.txt

2500	2505	2510
Glu Met Leu Gln Lys Lys Ile Val Asn Leu Gln Lys Ile Val Glu Glu		
2515	2520	2525
Lys Val Ala Ala Ala Leu Val Ser Gln Ile Gln Leu Glu Ala Val Gln		
2530	2535	2540
Glu Tyr Ala Lys Phe Cys Gln Asp Asn Gln Thr Ile Ser Ser Glu Pro		
2545	2550	2555
Glu Arg Thr Asn Ile Gln Asn Leu Asn Gln Leu Arg Glu Asp Glu Leu		
2565	2570	2575
Gly Ser Asp Ile Ser Ala Leu Thr Leu Arg Ile Ser Glu Leu Glu Ser		
2580	2585	2590
Gln Val Val Glu Met His Thr Ser Leu Ile Leu Glu Lys Glu Gln Val		
2595	2600	2605
Glu Ile Ala Glu Lys Asn Val Leu Glu Lys Glu Lys Lys Leu Leu Glu		
2610	2615	2620
Leu Gln Lys Leu Leu Glu Gly Asn Glu Lys Lys Gln Arg Glu Lys Glu		
2625	2630	2635
Lys Lys Arg Ser Pro Gln Asp Val Glu Val Leu Lys Thr Thr Glu		
2645	2650	2655
Leu Phe His Ser Asn Glu Glu Ser Gly Phe Asn Glu Leu Glu Ala		
2660	2665	2670
Leu Arg Ala Glu Ser Val Ala Thr Lys Ala Glu Leu Ala Ser Tyr Lys		
2675	2680	2685
Glu Lys Ala Glu Lys Leu Gln Glu Glu Leu Leu Val Lys Glu Thr Asn		
2690	2695	2700
Met Thr Ser Leu Gln Lys Asp Leu Ser Gln Val Arg Asp His Leu Ala		
2705	2710	2715
Glu Ala Lys Glu Lys Leu Ser Ile Leu Glu Lys Glu Asp Glu Thr Glu		
2725	2730	2735
Val Gln Glu Ser Lys Lys Ala Cys Met Phe Glu Pro Leu Pro Ile Lys		
2740	2745	2750
Leu Ser Lys Ser Ile Ala Ser Gln Thr Asp Gly Thr Leu Lys Ile Ser		
2755	2760	2765
Ser Ser Asn Gln Thr Pro Gln Ile Leu Val Lys Asn Ala Gly Ile Gln		
2770	2775	2780
Ile Asn Leu Gln Ser Glu Cys Ser Ser Glu Glu Val Thr Glu Ile Ile		
2785	2790	2795
Ser Gln Phe Thr Glu Lys Ile Glu Lys Met Gln Glu Leu His Ala Ala		
2805	2810	2815
Glu Ile Leu Asp Met Glu Ser Arg His Ile Ser Glu Thr Glu Thr Leu		
2820	2825	2830
Lys Arg Glu His Tyr Val Ala Val Gln Leu Leu Lys Glu Glu Cys Gly		
2835	2840	2845
Thr Leu Lys Ala Val Ile Gln Cys Leu Arg Ser Lys Glu Val Phe Gly		
2850	2855	2860
Phe Tyr Asn Met Cys Phe Ser Thr Leu Cys Asp Ser Gly Ser Asp Trp		
2865	2870	2875
Gly Gln Gly Ile Tyr Leu Thr His Ser Gln Gly Phe Asp Ile Ala Ser		
2885	2890	2895
Glu Gly Arg Gly Glu Glu Ser Glu Ser Ala Thr Asp Ser Phe Pro Lys		
2900	2905	2910
Lys Ile Lys Gly Leu Leu Arg Ala Val His Asn Glu Gly Met Gln Val		
2915	2920	2925

## 8471-010 b.txt

Leu Ser Leu Thr Glu Ser Pro Tyr Ser Asp Gly Glu Asp His Ser Ile  
 2930 2935 2940  
 Gln Gln Val Ser Glu Pro Trp Leu Glu Glu Arg Lys Ala Tyr Ile Asn  
 2945 2950 2955 2960  
 Thr Ile Ser Ser Leu Lys Asp Leu Ile Thr Lys Met Gln Leu Gln Arg  
 2965 2970 2975  
 Glu Ala Glu Val Tyr Asp Ser Ser Gln Ser His Glu Ser Phe Ser Asp  
 2980 2985 2990  
 Trp Arg Gly Glu Leu Leu Ala Leu Gln Gln Val Phe Leu Glu Glu  
 2995 3000 3005  
 Arg Ser Val Leu Leu Ala Ala Phe Arg Thr Glu Leu Thr Ala Leu Gly  
 3010 3015 3020  
 Thr Thr Asp Ala Val Gly Leu Leu Asn Cys Leu Glu Gln Arg Ile Gln  
 3025 3030 3035 3040  
 Glu Gln Gly Val Glu Tyr Gln Ala Ala Met Glu Cys Leu Gln Lys Ala  
 3045 3050 3055  
 Asp Arg Arg Ser Leu Leu Ser Glu Ile Gln Ala Leu His Ala Gln Met  
 3060 3065 3070  
 Asn Gly Arg Lys Ile Thr Leu Lys Arg Glu Gln Glu Ser Glu Lys Pro  
 3075 3080 3085  
 Ser Gln Glu Leu Leu Glu Tyr Asn Ile Gln Gln Lys Gln Ser Gln Met  
 3090 3095 3100  
 Leu Glu Met Gln Val Glu Leu Ser Ser Met Lys Asp Arg Ala Thr Glu  
 3105 3110 3115 3120  
 Leu Gln Glu Gln Leu Ser Ser Glu Lys Met Val Val Ala Glu Leu Lys  
 3125 3130 3135  
 Ser Glu Leu Ala Gln Thr Lys Leu Glu Leu Glu Thr Thr Leu Lys Ala  
 3140 3145 3150  
 Gln His Lys His Leu Lys Glu Leu Glu Ala Phe Arg Leu Glu Val Lys  
 3155 3160 3165  
 Asp Lys Thr Asp Glu Val His Leu Leu Asn Asp Thr Leu Ala Ser Glu  
 3170 3175 3180  
 Gln Lys Lys Ser Arg Glu Leu Gln Trp Ala Leu Glu Lys Glu Lys Ala  
 3185 3190 3195 3200  
 Lys Leu Gly Arg Ser Glu Glu Arg Asp Lys Glu Glu Leu Glu Asp Leu  
 3205 3210 3215  
 Lys Phe Ser Leu Glu Ser Gln Lys Gln Arg Asn Leu Gln Leu Asn Leu  
 3220 3225 3230  
 Leu Leu Glu Gln Gln Lys Gln Leu Leu Asn Glu Ser Gln Gln Lys Ile  
 3235 3240 3245  
 Glu Ser Gln Arg Met Leu Tyr Asp Ala Gln Leu Ser Glu Glu Gln Gly  
 3250 3255 3260  
 Arg Asn Leu Glu Leu Gln Val Leu Leu Glu Ser Glu Lys Val Arg Ile  
 3265 3270 3275 3280  
 Arg Glu Met Ser Ser Thr Leu Asp Arg Glu Arg Glu Leu His Ala Gln  
 3285 3290 3295  
 Leu Gln Ser Ser Asp Gly Thr Gly Gln Ser Arg Pro Pro Leu Pro Ser  
 3300 3305 3310  
 Glu Asp Leu Leu Lys Glu Leu Gln Lys Gln Leu Glu Glu Lys His Ser  
 3315 3320 3325  
 Arg Ile Val Glu Leu Leu Asn Glu Thr Glu Lys Tyr Lys Leu Asp Ser  
 3330 3335 3340  
 Leu Gln Thr Arg Gln Gln Met Glu Lys Asp Arg Gln Val His Arg Lys

## 8471-010 b.txt

3345	3350	3355	3360
Thr Leu Gln Thr Glu Gln Glu Ala Asn Thr Glu Gly Gln Lys Lys Met			
3365	3370	3375	
His Glu Leu Gln Ser Lys Val Glu Asp Leu Gln Arg Gln Leu Glu Glu			
3380	3385	3390	
Lys Arg Gln Gln Val Tyr Lys Leu Asp Leu Glu Gly Gln Arg Leu Gln			
3395	3400	3405	
Gly Ile Met Gln Glu Phe Gln Lys Gln Glu Leu Glu Arg Glu Glu Lys			
3410	3415	3420	
Arg Glu Ser Arg Arg Ile Leu Tyr Gln Asn Leu Asn Glu Pro Thr Thr			
3425	3430	3435	3440
Trp Ser Leu Thr Ser Asp Arg Thr Arg Asn Trp Val Leu Gln Gln Lys			
3445	3450	3455	
Ile Glu Gly Glu Thr Lys Glu Ser Asn Tyr Ala Lys Leu Ile Glu Met			
3460	3465	3470	
Asn Gly Gly Thr Gly Cys Asn His Glu Leu Glu Met Ile Arg Gln			
3475	3480	3485	
Lys Leu Gln Cys Val Ala Ser Lys Leu Gln Val Leu Pro Gln Lys Ala			
3490	3495	3500	
Ser Glu Arg Leu Gln Phe Glu Thr Ala Asp Asp Glu Asp Phe Ile Trp			
3505	3510	3515	3520
Val Gln Glu Asn Ile Asp Glu Ile Ile Leu Gln Leu Gln Lys Leu Thr			
3525	3530	3535	
Gly Gln Gln Gly Glu Glu Pro Ser Leu Val Ser Pro Ser Thr Ser Cys			
3540	3545	3550	
Gly Ser Leu Thr Glu Arg Leu Leu Arg Gln Asn Ala Glu Leu Thr Gly			
3555	3560	3565	
His Ile Ser Gln Leu Thr Glu Glu Lys Asn Asp Leu Arg Asn Met Val			
3570	3575	3580	
Met Lys Leu Glu Glu Gln Ile Arg Trp Tyr Arg Gln Thr Gly Ala Gly			
3585	3590	3595	3600
Arg Asp Asn Ser Ser Arg Phe Ser Leu Asn Gly Gly Ala Asn Ile Glu			
3605	3610	3615	
Ala Ile Ile Ala Ser Glu Lys Glu Val Trp Asn Arg Glu Lys Leu Thr			
3620	3625	3630	
Leu Gln Lys Ser Leu Lys Arg Ala Glu Ala Glu Val Tyr Lys Leu Lys			
3635	3640	3645	
Ala Glu Leu Arg Asn Asp Ser Leu Leu Gln Thr Leu Ser Pro Asp Ser			
3650	3655	3660	
Glu His Val Thr Leu Lys Arg Ile Tyr Gly Lys Tyr Leu Arg Ala Glu			
3665	3670	3675	3680
Ser Phe Arg Lys Ala Leu Ile Tyr Gln Lys Lys Tyr Leu Leu Leu			
3685	3690	3695	
Leu Gly Gly Phe Gln Glu Cys Glu Asp Ala Thr Leu Ala Leu Leu Ala			
3700	3705	3710	
Arg Met Gly Gly Gln Pro Ala Phe Thr Asp Leu Glu Val Ile Thr Asn			
3715	3720	3725	
Arg Pro Lys Gly Phe Thr Arg Phe Arg Ser Ala Val Arg Val Ser Ile			
3730	3735	3740	
Ala Ile Ser Arg Met Lys Phe Leu Val Arg Arg Trp His Arg Val Thr			
3745	3750	3755	3760
Gly Ser Val Ser Ile Asn Ile Asn Arg Asp Gly Phe Gly Leu Asn Gln			
3765	3770	3775	

## 8471-010 b.txt

Gly Ala Glu Lys Thr Asp Ser Phe Tyr His Ser Ser Gly Gly Leu Glu  
     3780                       3785                       3790  
 Leu Tyr Gly Glu Pro Arg His Thr Thr Tyr Arg Ser Arg Ser Asp Leu  
     3795                       3800                       3805  
 Asp Tyr Ile Arg Ser Pro Leu Pro Phe Gln Asn Arg Tyr Pro Gly Thr  
     3810                       3815                       3820  
 Pro Ala Asp Phe Asn Pro Gly Ser Leu Ala Cys Ser Gln Leu Gln Asn  
     3825                       3830                       3835                       3840  
 Tyr Asp Pro Asp Arg Ala Leu Thr Asp Tyr Ile Thr Arg Leu Glu Ala  
     3845                       3850                       3855  
 Leu Gln Arg Arg Leu Gly Thr Ile Gln Ser Gly Ser Thr Thr Gln Phe  
     3860                       3865                       3870  
 His Ala Gly Met Arg Arg  
     3875

<210> 12  
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<212> PRT  
<213> Oryctolagus cuniculus

<400> 12  
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     1                       5                       10                       15  
 Leu Gln Lys Gln Val Lys Ala Leu Glu Ile Asp Val Glu Glu Gln Val  
     20                       25                       30  
 Cys Arg Phe Ile Glu Leu Glu Gln Glu Lys Asn Ala Glu Leu Met Asp  
     35                       40                       45  
 Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu Lys Met Arg  
     50                       55                       60  
 Lys Met Asp Leu Arg Gln Gln Asn Gln Ala Leu Glu Lys Gln Leu Glu  
     65                       70                       75                       80  
 Lys Met Arg Lys Phe Leu Asp Glu Gln Ala Ile Asp Arg Glu His Glu  
     85                       90                       95  
 Arg Asp Val Phe Gln Gln Glu Ile Gln Lys Leu Glu Gln Gln Leu Lys  
     100                       105                       110  
 Leu Val Pro Arg Phe Gln Pro Ile Ser Glu His Gln Thr Arg Glu Val  
     115                       120                       125  
 Glu Gln Leu Thr Asn His Leu Lys Glu Lys Thr Asp Lys Cys Ser Glu  
     130                       135                       140  
 Leu Leu Leu Ser Lys Glu Gln Leu Gln Arg Asp Val Gln Glu Arg Asn  
     145                       150                       155                       160  
 Glu Glu Ile Glu Lys Leu Glu Cys Arg Val Arg Glu Leu Glu Gln Ala  
     165                       170                       175  
 Leu Leu Ser Val Gln Thr Leu Ser Lys Arg Trp Arg Thr Arg Asn Ser  
     180                       185                       190  
 Phe Gly Ala Val Glu Pro Lys Ala Glu Leu Cys Leu Glu Val Gln Leu  
     195                       200                       205  
 Gln Ala Glu Arg Asp Ala Ile Asp Arg Lys Glu Lys Glu Ile Thr Asn  
     210                       215                       220  
 Leu Glu Glu Gln Leu Glu Gln Phe Arg Glu Glu Leu Glu Asn Lys Asn  
     225                       230                       235                       240  
 Glu Glu Val Gln Gln Leu His Met Gln Leu Glu Ile Gln Lys Lys Glu  
     245                       250                       255

## 8471-010 b.txt

Ser Thr Thr Arg Leu Gln Glu Leu Glu Gln Glu Asn Lys Leu Phe Lys  
           260                 265                 270  
 Asp Glu Met Glu Lys Leu Gly Phe Ala Ile Lys Glu Ser Asp Ala Val  
           275                 280                 285  
 Ser Pro Gln Asp Gln Gln Val Leu Phe Gly Lys Phe Ala Gln Ile Ile  
           290                 295                 300  
 His Glu Lys Glu Val Glu Ile Asp Arg Leu Asn Glu Gln Ile Ile Lys  
           305                 310                 315                 320  
 Leu Gln Gln Gln Leu Lys Ile Thr Thr Asp Asn Lys Val Ile Glu Glu  
           325                 330                 335  
 Lys Asn Glu Leu Ile Arg Asp Leu Glu Ala Gln Ile Glu Cys Leu Met  
           340                 345                 350  
 Ser Asp Gln Glu Arg Val Arg Lys Asn Arg Glu Glu Glu Ile Glu Gln  
           355                 360                 365  
 Leu Asn Glu Val Ile Glu Lys Leu Gln Gln Glu Leu Ala Asn Ile Asp  
           370                 375                 380  
 Gln Lys Thr Ser Val Asp Pro Ser Ser Leu Ser Glu Glu Ala Asp Ser  
           385                 390                 395                 400  
 Leu Lys His Gln Leu Asp Lys Val Ile Ala Glu Lys Leu Ala Leu Glu  
           405                 410                 415  
 His Gln Val Glu Thr Thr Asn Glu Glu Met Ala Val Thr Lys Asn Val  
           420                 425                 430  
 Leu Lys Glu Thr Asn Phe Lys Met Asn Gln Leu Thr Gln Glu Leu Cys  
           435                 440                 445  
 Ser Leu Lys Arg Glu Arg Glu Lys Met Glu Arg Ile Gln Ser Val Pro  
           450                 455                 460  
 Glu Lys Ser Val Asn Met Ser Val Gly Asp Leu Ser Lys Asp Lys Pro  
           465                 470                 475                 480  
 Glu Met Asp Leu Ile Pro Thr Glu Asp Ala Leu Ala Gln Leu Glu Thr  
           485                 490                 495  
 Gln Thr Gln Leu Arg Ser Ser Glu Glu Ser Ser Lys Val Ser Leu Ser  
           500                 505                 510  
 Ser Leu Glu Thr Lys Leu Leu Gln Leu Glu Ser Thr Val Ser Thr Lys  
           515                 520                 525  
 Asp Leu Glu Leu Thr Gln Cys Tyr Lys Gln Ile Gln Asp Met Arg Glu  
           530                 535                 540  
 Gln Gly Arg Ser Glu Thr Glu Met Leu Gln Thr Lys Ile Val Ser Leu  
           545                 550                 555                 560  
 Gln Lys Val Leu Glu Glu Lys Val Ala Ala Ala Leu Val Ser Gln Val  
           565                 570                 575  
 Gln Leu Glu Ala Val Gln Glu Tyr Val Lys Leu Cys Ala Asp Lys Pro  
           580                 585                 590  
 Ala Val Ser Ser Asp Pro Ala Arg Thr Glu Val Pro Gly Leu Ser Gln  
           595                 600                 605  
 Leu Ala Gly Asn Thr Met Glu Ser Asp Val Ser Ala Leu Thr Trp Arg  
           610                 615                 620  
 Ile Ser Glu Leu Glu Ser Gln Leu Val Glu Met His Ser Ser Leu Ile  
           625                 630                 635                 640  
 Ser Glu Lys Glu Gln Val Glu Ile Ala Glu Lys Asn Ala Leu Glu Lys  
           645                 650                 655  
 Glu Lys Lys Leu Gln Glu Leu Gln Lys Leu Val Gln Asp Ser Glu Thr  
           660                 665                 670  
 Lys Gln Arg Glu Arg Glu Arg Gln Ser Arg Leu His Gly Asp Leu Gly

## 8471-010 b.txt

675	680	685
Val Leu Glu Ser Thr Thr Ser Glu Glu Ser Gly Val Phe Gly Glu Leu		
690	695	700
Glu Ala Leu Arg Ala Glu Ser Ala Ala Pro Lys Gly Glu Leu Ala Asn		
705	710	715
Tyr Lys Glu Leu Ala Glu Lys Leu Gln Glu Glu Leu Leu Val Lys Glu		
725	730	735
Thr Asn Met Ala Ser Leu Pro Lys Glu Leu Ser His Val Arg Asp Gln		
740	745	750
Leu Thr Glu Ala Glu Asp Lys Leu Ser His Phe Ser Glu Lys Glu Asp		
755	760	765
Lys Thr Glu Val Gln Glu His Gly Thr Ile Cys Ile Leu Glu Pro Cys		
770	775	780
Pro Gly Gln Ile Gly Glu Ser Phe Ala Ser Gln Thr Glu Gly Ala Val		
785	790	795
Gln Val Asn Ser His Thr Gln Thr Pro Gln Ile Pro Val Arg Ser Val		
805	810	815
Gly Ile Gln Thr His Ser Gln Ser Asp Ser Ser Pro Glu Glu Val Ala		
820	825	830
Glu Ile Ile Ser Arg Phe Thr Glu Lys Ile Glu Gln Met Arg Glu Leu		
835	840	845
His Ala Ala Glu Ile Leu Asp Met Glu Ser Arg His Ile Ser Glu Thr		
850	855	860
Glu Thr Leu Lys Arg Glu His Cys Ile Ala Val Gln Leu Leu Thr Glu		
865	870	875
Glu Cys Ala Ser Leu Lys Ser Leu Ile Gln Gly Leu Arg Met Pro Glu		
885	890	895
Gly Ser Ser Val Pro Glu Leu Thr His Ser Asn Ala Tyr Gln Thr Arg		
900	905	910
Glu Val Gly Ser Ser Asp Ser Gly Ser Asp Trp Gly Gln Gly Ile Tyr		
915	920	925
Leu Thr Gln Ser Gln Gly Phe Asp Thr Ala Ser Glu Ala Arg Gly Glu		
930	935	940
Glu Gly Glu Thr Ser Thr Asp Ser Phe Pro Lys Lys Ile Lys Gly Leu		
945	950	955
Leu Arg Ala Val His Asn Glu Gly Met Gln Val Leu Ser Leu Thr Glu		
965	970	975
Gly Pro Cys Gly Asp Gly Glu Asp Tyr Pro Gly His Gln Leu Ser Glu		
980	985	990
Ser Trp Leu Glu Glu Arg Arg Ala Tyr Leu Ser Thr Ile Ser Ser Leu		
995	1000	1005
Lys Asp Phe Ile Thr Lys Met Gln Val Gln Arg Glu Val Glu Val Tyr		
1010	1015	1020
Asp Ser Ser Gln Ser His Glu Asn Ile Ser Asp Trp Arg Gly Glu Leu		
1025	1030	1035
Leu Leu Ala Leu Gln Gln Val Phe Leu Arg Glu Arg Ser Val Leu Leu		
1045	1050	1055
Ala Ala Phe Lys Thr Glu Leu Thr Ala Leu Gly Thr Arg Asp Ala Ala		
1060	1065	1070
Gly Leu Leu Asn Cys Leu Glu Gln Arg Ile Pro Arg Thr Glu Tyr		
1075	1080	1085

&lt;211&gt; 503

&lt;212&gt; PRT

&lt;213&gt; Drosophila melanogaster

&lt;400&gt; 13

Met	Asp	Ser	Asp	Asn	Asp	Asn	Asp	Phe	Cys	Asp	Asn	Val	Asp	Ser	Gly
1				5					10					15	
Asn	Val	Ser	Ser	Gly	Asp	Asp	Gly	Asp	Asp	Asp	Phe	Gly	Met	Glu	Val
				20				25					30		
Asp	Leu	Pro	Ser	Ser	Ala	Asp	Arg	Gln	Met	Asp	Gln	Asp	Asp	Tyr	Gln
				35			40					45			
Tyr	Lys	Val	Leu	Thr	Thr	Asp	Glu	Ile	Val	Gln	His	Gln	Arg	Glu	Ile
				50			55				60				
Ile	Asp	Glu	Ala	Asn	Leu	Leu	Leu	Lys	Leu	Pro	Thr	Pro	Thr	Thr	Arg
	65				70					75			80		
Ile	Leu	Leu	Asn	His	Phe	Lys	Trp	Asp	Lys	Glu	Lys	Leu	Leu	Glu	Lys
				85				90				95			
Tyr	Phe	Asp	Asp	Asn	Thr	Asp	Glu	Phe	Phe	Lys	Cys	Ala	His	Val	Ile
				100				105				110			
Asn	Pro	Phe	Asn	Ala	Thr	Glu	Ala	Ile	Lys	Gln	Lys	Thr	Ser	Arg	Ser
				115				120				125			
Gln	Cys	Glu	Glu	Cys	Glu	Ile	Cys	Phe	Ser	Gln	Leu	Pro	Pro	Asp	Ser
				130			135				140				
Met	Ala	Gly	Leu	Glu	Cys	Gly	His	Arg	Phe	Cys	Met	Pro	Cys	Trp	His
	145				150					155			160		
Glu	Tyr	Leu	Ser	Thr	Lys	Ile	Val	Ala	Glu	Gly	Leu	Gly	Gln	Thr	Ile
				165				170				175			
Ser	Cys	Ala	Ala	His	Gly	Cys	Asp	Ile	Leu	Val	Asp	Asp	Val	Thr	Val
				180				185				190			
Ala	Asn	Leu	Val	Thr	Asp	Ala	Arg	Val	Arg	Val	Lys	Tyr	Gln	Gln	Leu
				195				200				205			
Ile	Thr	Asn	Ser	Phe	Val	Glu	Cys	Asn	Gln	Leu	Leu	Arg	Trp	Cys	Pro
				210			215				220				
Ser	Val	Asp	Cys	Thr	Tyr	Ala	Val	Lys	Val	Pro	Tyr	Ala	Glu	Pro	Arg
	225				230				235			240			
Arg	Val	His	Cys	Lys	Cys	Gly	His	Val	Phe	Cys	Phe	Ala	Cys	Gly	Glu
				245				250				255			
Asn	Trp	His	Asp	Pro	Val	Lys	Cys	Arg	Trp	Leu	Lys	Lys	Trp	Ile	Lys
				260				265				270			
Lys	Cys	Asp	Asp	Asp	Ser	Glu	Thr	Ser	Asn	Trp	Ile	Ala	Ala	Asn	Thr
				275				280				285			
Lys	Glu	Cys	Pro	Arg	Cys	Ser	Val	Thr	Ile	Glu	Lys	Asp	Gly	Gly	Cys
				290			295				300				
Asn	His	Met	Val	Cys	Lys	Asn	Gln	Asn	Cys	Lys	Asn	Glu	Phe	Cys	Trp
					310					315			320		
Val	Cys	Leu	Gly	Ser	Trp	Glu	Pro	His	Gly	Ser	Ser	Trp	Tyr	Asn	Cys
				325				330				335			
Asn	Arg	Tyr	Asp	Glu	Asp	Glu	Ala	Lys	Thr	Ala	Arg	Asp	Ala	Gln	Glu
				340				345				350			
Lys	Leu	Arg	Ser	Ser	Leu	Ala	Arg	Tyr	Leu	His	Tyr	Tyr	Asn	Arg	Tyr
				355				360				365			
Met	Asn	His	Met	Gln	Ser	Met	Lys	Phe	Glu	Asn	Lys	Leu	Tyr	Ala	Ser
				370			375				380				

## 8471-010 b.txt

Val Lys Gln Lys Met Glu Glu Met Gln Gln His Asn Met Ser Trp Ile  
 385 390 395 400  
 Glu Val Gln Phe Leu Lys Lys Ala Val Asp Ile Leu Cys Gln Cys Arg  
 405 410 415  
 Gln Thr Leu Met Tyr Thr Tyr Val Phe Ala Tyr Tyr Leu Lys Lys Asn  
 420 425 430  
 Asn Gln Ser Met Ile Phe Glu Asp Asn Gln Lys Asp Leu Glu Ser Ala  
 435 440 445  
 Thr Glu Met Leu Ser Glu Tyr Leu Glu Arg Asp Ile Thr Ser Glu Asn  
 450 455 460  
 Leu Ala Asp Ile Lys Gln Lys Val Gln Asp Lys Tyr Arg Tyr Cys Glu  
 465 470 475 480  
 Lys Arg Cys Ser Val Leu Leu Lys His Val His Glu Gly Tyr Asp Lys  
 485 490 495  
 Glu Trp Trp Glu Tyr Thr Glu  
 500

<210> 14  
 <211> 961  
 <212> PRT  
 <213> Homo sapiens

<400> 14  
 Met Leu Leu Leu Leu Leu Ala Pro Leu Phe Leu Arg Pro Pro Gly  
 1 5 10 15  
 Ala Gly Gly Ala Gln Thr Pro Asn Ala Thr Ser Glu Gly Cys Gln Ile  
 20 25 30  
 Ile His Pro Pro Trp Glu Gly Ile Arg Tyr Arg Gly Leu Thr Arg  
 35 40 45  
 Asp Gln Val Lys Ala Ile Asn Phe Leu Pro Val Asp Tyr Glu Ile Glu  
 50 55 60  
 Tyr Val Cys Arg Gly Glu Arg Glu Val Val Gly Pro Lys Val Arg Lys  
 65 70 75 80  
 Cys Leu Ala Asn Gly Ser Trp Thr Asp Met Asp Thr Pro Ser Arg Cys  
 85 90 95  
 Val Arg Ile Cys Ser Lys Ser Tyr Leu Thr Leu Glu Asn Gly Lys Val  
 100 105 110  
 Phe Leu Thr Gly Gly Asp Leu Pro Ala Leu Asp Gly Ala Arg Val Asp  
 115 120 125  
 Phe Arg Cys Asp Pro Asp Phe His Leu Val Gly Ser Ser Arg Ser Ile  
 130 135 140  
 Cys Ser Gln Gly Gln Trp Ser Thr Pro Lys Pro His Cys Gln Val Asn  
 145 150 155 160  
 Arg Thr Pro His Ser Glu Arg Arg Ala Val Tyr Ile Gly Ala Leu Phe  
 165 170 175  
 Pro Met Ser Gly Gly Trp Pro Gly Gly Gln Ala Cys Gln Pro Ala Val  
 180 185 190  
 Glu Met Ala Leu Glu Asp Val Asn Ser Arg Arg Asp Ile Leu Pro Asp  
 195 200 205  
 Tyr Glu Leu Lys Leu Ile His His Asp Ser Lys Cys Asp Pro Gly Gln  
 210 215 220  
 Ala Thr Lys Tyr Leu Tyr Glu Leu Leu Tyr Asn Asp Pro Ile Lys Ile  
 225 230 235 240

## 8471-010 b.txt

Ile Leu Met Pro Gly Cys Ser Ser Val Ser Thr Leu Val Ala Glu Ala  
 245 250 255  
 Ala Arg Met Trp Asn Leu Ile Val Leu Ser Tyr Gly Ser Ser Pro  
 260 265 270  
 Ala Leu Ser Asn Arg Gln Arg Phe Pro Thr Phe Phe Arg Thr His Pro  
 275 280 285  
 Ser Ala Thr Leu His Asn Pro Thr Arg Val Lys Leu Phe Glu Lys Trp  
 290 295 300  
 Gly Trp Lys Lys Ile Ala Thr Ile Gln Gln Thr Thr Glu Val Phe Thr  
 305 310 315 320  
 Ser Thr Leu Asp Asp Leu Glu Glu Arg Val Lys Glu Ala Gly Ile Glu  
 325 330 335  
 Ile Thr Phe Arg Gln Ser Phe Phe Ser Asp Pro Ala Val Pro Val Lys  
 340 345 350  
 Asn Leu Lys Arg Gln Asp Ala Arg Ile Ile Val Gly Leu Phe Tyr Glu  
 355 360 365  
 Thr Glu Ala Arg Lys Val Phe Cys Glu Val Tyr Lys Glu Arg Leu Phe  
 370 375 380  
 Gly Lys Lys Tyr Val Trp Phe Leu Ile Gly Trp Tyr Ala Asp Asn Trp  
 385 390 395 400  
 Phe Lys Ile Tyr Asp Pro Ser Ile Asn Cys Thr Val Asp Glu Met Thr  
 405 410 415  
 Glu Ala Val Glu Gly His Ile Thr Thr Glu Ile Val Met Leu Asn Pro  
 420 425 430  
 Ala Asn Thr Arg Ser Ile Ser Asn Met Thr Ser Gln Glu Phe Val Glu  
 435 440 445  
 Lys Leu Thr Lys Arg Leu Lys Arg His Pro Glu Glu Thr Gly Gly Phe  
 450 455 460  
 Gln Glu Ala Pro Leu Ala Tyr Asp Ala Ile Trp Ala Leu Ala Leu Ala  
 465 470 475 480  
 Leu Asn Lys Thr Ser Gly Gly Gly Arg Ser Gly Val Arg Leu Glu  
 485 490 495  
 Asp Phe Asn Tyr Asn Asn Gln Thr Ile Thr Asp Gln Ile Tyr Arg Ala  
 500 505 510  
 Met Asn Ser Ser Ser Phe Glu Gly Val Ser Gly His Val Val Phe Asp  
 515 520 525  
 Ala Ser Gly Ser Arg Met Ala Trp Thr Leu Ile Glu Gln Leu Gln Gly  
 530 535 540  
 Gly Ser Tyr Lys Lys Ile Gly Tyr Tyr Asp Ser Thr Lys Asp Asp Leu  
 545 550 555 560  
 Ser Trp Ser Lys Thr Asp Lys Trp Ile Gly Gly Ser Pro Pro Ala Asp  
 565 570 575  
 Gln Thr Leu Val Ile Lys Thr Phe Arg Phe Leu Ser Gln Lys Leu Phe  
 580 585 590  
 Ile Ser Val Ser Val Leu Ser Ser Leu Gly Ile Val Leu Ala Val Val  
 595 600 605  
 Cys Leu Ser Phe Asn Ile Tyr Asn Ser His Val Arg Tyr Ile Gln Asn  
 610 615 620  
 Ser Gln Pro Asn Leu Asn Asn Leu Thr Ala Val Gly Cys Ser Leu Ala  
 625 630 635 640  
 Leu Ala Ala Val Phe Pro Leu Gly Leu Asp Gly Tyr His Ile Gly Arg  
 645 650 655  
 Asn Gln Phe Pro Phe Val Cys Gln Ala Arg Leu Trp Leu Leu Gly Leu

## 8471-010 b.txt

660	665	670
Gly Phe Ser Leu Gly Tyr Gly	Ser Met Phe Thr Lys Ile Trp Trp Val	
675	680	685
His Thr Val Phe Thr Lys Lys Glu Glu Lys Lys Glu Trp Arg Lys Thr		
690	695	700
Leu Glu Pro Trp Lys Leu Tyr Ala Thr Val Gly Leu Leu Val Gly Met		
705	710	715
Asp Val Leu Thr Leu Ala Ile Trp Gln Ile Val Asp Pro Leu His Arg		
725	730	735
Thr Ile Glu Thr Phe Ala Lys Glu Glu Pro Lys Glu Asp Ile Asp Val		
740	745	750
Ser Ile Leu Pro Gln Leu Glu His Cys Ser Ser Arg Lys Met Asn Thr		
755	760	765
Trp Leu Gly Ile Phe Tyr Gly Tyr Lys Gly Leu Leu Leu Leu Gly		
770	775	780
Ile Phe Leu Ala Tyr Glu Thr Lys Ser Val Ser Thr Glu Lys Ile Asn		
785	790	795
Asp His Arg Ala Val Gly Met Ala Ile Tyr Asn Val Ala Val Leu Cys		
805	810	815
Leu Ile Thr Ala Pro Val Thr Met Ile Leu Ser Ser Gln Gln Asp Ala		
820	825	830
Ala Phe Ala Phe Ala Ser Leu Ala Ile Val Phe Ser Ser Tyr Ile Thr		
835	840	845
Leu Val Val Leu Phe Val Pro Lys Met Arg Arg Leu Ile Thr Arg Gly		
850	855	860
Glu Trp Gln Ser Glu Ala Gln Asp Thr Met Lys Thr Gly Ser Ser Thr		
865	870	875
Asn Asn Asn Glu Glu Lys Ser Arg Leu Leu Glu Lys Glu Asn Arg		
885	890	895
Glu Leu Glu Lys Ile Ile Ala Glu Lys Glu Glu Arg Val Ser Glu Leu		
900	905	910
Arg His Gln Leu Gln Ser Arg Gln Gln Leu Arg Ser Arg Arg His Pro		
915	920	925
Pro Thr Pro Pro Glu Pro Ser Gly Gly Leu Pro Arg Gly Pro Pro Glu		
930	935	940
Pro Pro Asp Arg Leu Ser Cys Asp Gly Ser Arg Val His Leu Leu Tyr		
945	950	955
Lys		960

<210> 15  
<211> 281  
<212> PRT  
<213> *Saccharomyces cerevisiae*

<400> 15  
Met Ser Glu Tyr Gln Pro Ser Leu Phe Ala Leu Asn Pro Met Gly Phe  
1           5           10           15  
Ser Pro Leu Asp Gly Ser Lys Ser Thr Asn Glu Asn Val Ser Ala Ser  
20           25           30  
Thr Ser Thr Ala Lys Pro Met Val Gly Gln Leu Ile Phe Asp Lys Phe  
35           40           45  
Ile Lys Thr Glu Glu Asp Pro Ile Ile Lys Gln Asp Thr Pro Ser Asn

## 8471-010 b.txt

50	55	60
Leu	Asp	Phe
Asp	Phe	Asp
Phe	Ala	Leu
Leu	Pro	Gln
Thr	Ala	Thr
Ala	Pro	Asp
65	65	65
Lys	Thr	Val
Val	Leu	Pro
Ile	Pro	Glu
Leu	Asp	Asp
Asn	Ser	Asp
Ser	Thr	Asp
Thr	Asp	Ser
Asp	Ser	Thr
100	100	100
Phe	Phe	Ser
Ser	Ser	Ser
85	85	85
Phe	Phe	Ser
Ser	Ser	Ser
115	115	115
Leu	Glu	Asp
Asp	Asn	Ser
Ser	Lys	Glu
Lys	Trp	Thr
Trp	Thr	Ser
Ser	Leu	Phe
Phe	Asp	Asn
Asn	Asp	Ile
Ile	130	130
Pro	Val	Thr
Thr	Asp	Asp
Asp	Val	Ser
Val	Leu	Ala
Ala	Asp	Lys
Lys	Ala	Ile
Ile	Glu	Ser
Ser	135	135
Thr	Glu	Glu
Glu	Val	Val
Val	Ser	Leu
Leu	Val	Pro
Pro	Ser	Asn
Asn	Leu	Glu
Glu	Val	Val
Val	Ser	Thr
Thr	Thr	Thr
Asp	145	145
Gly	150	150
Ser	165	165
Phe	170	170
Leu	175	175
Asp	Arg	Lys
Arg	180	180
Lys	185	185
Pro	190	190
Asn	Gly	Lys
Gly	195	195
Asp	200	200
Asp	205	205
Arg	210	210
Lys	215	215
Gln	220	220
Arg	Ser	Arg
Arg	225	225
Pro	230	230
Ala	235	235
Ala	Arg	Arg
Leu	240	240
Lys	Arg	Arg
Arg	245	245
Ser	250	250
Arg	255	255
Ala	Arg	Arg
Leu	260	260
Glu	265	265
Leu	270	270
Ser	Arg	Arg
Lys	275	275
Leu	280	280
Val	Arg	Arg

<210> 16  
<211> 957  
<212> PRT  
<213> Homo sapiens

<400> 16

Met	Ala	Asp	Pro	Ala	Glu	Cys	Ser	Ile	Lys	Val	Met	Cys	Arg	Phe	Arg
1	5	5	10	10	10	15	15	15	15	15	15	15	15	15	15
Pro	Leu	Asn	Glu	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro	Lys
20	20	20	25	25	25	30	30	30	30	30	30	30	30	30	30
Phe	Lys	Gly	Asp	Glu	Thr	Val	Val	Ile	Gly	Gln	Gly	Lys	Pro	Tyr	Val
35	35	35	40	40	40	45	45	45	45	45	45	45	45	45	45
Phe	Asp	Arg	Val	Leu	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	Asn
50	50	50	55	55	55	60	60	60	60	60	60	60	60	60	60
Ala	Cys	Ala	Lys	Gln	Ile	Val	Lys	Asp	Val	Leu	Glu	Gly	Tyr	Asn	Gly
65	65	65	70	70	70	75	75	75	75	75	75	75	75	75	75
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
85	85	85	90	90	90	95	95	95	95	95	95	95	95	95	95
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
100	100	100	105	105	105	110	110	110	110	110	110	110	110	110	110
Ala	His	Asp	Ile	Phe	Asp	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
115	115	115	120	120	120	125	125	125	125	125	125	125	125	125	125
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg

## 8471-010 b.txt

130	135	140													
Asp	Leu	Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ala	Val	His	Glu	Asp	Lys
145						150					155				160
Asn	Arg	Val	Pro	Tyr	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
						165			170					175	
Pro	Glu	Glu	Val	Met	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ala	Asn	Arg	His
						180			185					190	
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile
						195			200				205		
Phe	Leu	Ile	Asn	Ile	Lys	Gln	Glu	Asn	Val	Glu	Thr	Glu	Lys	Lys	Leu
						210			215			220			
Ser	Gly	Lys	Leu	Tyr	Leu	Val	Asp	Leu	Ala	Gly	Ser	Glu	Lys	Val	Ser
						225			230			235		240	
Lys	Thr	Gly	Ala	Glu	Gly	Ala	Val	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Asn
						245			250					255	
Lys	Ser	Leu	Ser	Ala	Leu	Gly	Asn	Val	Ile	Ser	Ala	Leu	Ala	Glu	Gly
						260			265				270		
Thr	Lys	Thr	His	Val	Pro	Tyr	Arg	Asp	Ser	Lys	Met	Thr	Arg	Ile	Leu
						275			280			285			
Gln	Asp	Ser	Leu	Gly	Gly	Asn	Cys	Arg	Thr	Thr	Ile	Val	Ile	Cys	Cys
						290			295			300			
Ser	Pro	Ser	Val	Phe	Asn	Glu	Ala	Glu	Thr	Lys	Ser	Thr	Leu	Met	Phe
						305			310			315		320	
Gly	Gln	Arg	Ala	Lys	Thr	Ile	Lys	Asn	Thr	Val	Ser	Val	Asn	Leu	Glu
						325			330					335	
Leu	Thr	Ala	Glu	Glu	Trp	Lys	Lys	Tyr	Glu	Lys	Glu	Lys	Glu	Lys	
						340			345			350			
Asn	Lys	Thr	Leu	Lys	Asn	Val	Ile	Gln	His	Leu	Glu	Met	Glu	Leu	Asn
						355			360			365			
Arg	Trp	Arg	Asn	Gly	Glu	Ala	Val	Pro	Glu	Asp	Glu	Gln	Ile	Ser	Ala
						370			375			380			
Lys	Asp	Gln	Lys	Asn	Leu	Glu	Pro	Cys	Asp	Asn	Thr	Pro	Ile	Ile	Asp
						385			390			395		400	
Asn	Ile	Ala	Pro	Val	Val	Ala	Gly	Ile	Ser	Thr	Glu	Glu	Lys	Glu	Lys
						405			410			415			
Tyr	Asp	Glu	Glu	Ile	Ser	Ser	Leu	Tyr	Arg	Gln	Leu	Asp	Asp	Lys	Asp
						420			425			430			
Asp	Glu	Ile	Asn	Gln	Gln	Ser	Gln	Leu	Ala	Glu	Lys	Leu	Lys	Gln	Gln
						435			440			445			
Met	Leu	Asp	Gln	Asp	Glu	Leu	Leu	Ala	Ser	Thr	Arg	Arg	Asp	Tyr	Glu
						450			455			460			
Lys	Ile	Gln	Glu	Glu	Leu	Thr	Arg	Leu	Gln	Ile	Glu	Asn	Glu	Ala	Ala
						465			470			475		480	
Lys	Asp	Glu	Val	Lys	Glu	Val	Leu	Gln	Ala	Leu	Glu	Glu	Leu	Ala	Val
						485			490			495			
Asn	Tyr	Asp	Gln	Lys	Ser	Gln	Glu	Val	Glu	Asp	Lys	Thr	Arg	Ala	Asn
						500			505			510			
Glu	Gln	Leu	Thr	Asp	Glu	Leu	Ala	Gln	Lys	Thr	Thr	Thr	Leu	Thr	Thr
						515			520			525			
Thr	Gln	Arg	Glu	Leu	Ser	Gln	Leu	Gln	Glu	Leu	Ser	Asn	His	Gln	Lys
						530			535			540			
Lys	Arg	Ala	Thr	Glu	Ile	Leu	Asn	Leu	Leu	Leu	Lys	Asp	Leu	Gly	Glu
						545			550			555		560	

## 8471-010 b.txt

Ile Gly Gly Ile Ile Gly Thr Asn Asp Val Lys Thr Leu Ala Asp Val  
                  565                 570                 575  
 Asn Gly Val Ile Glu Glu Glu Phe Thr Met Ala Arg Leu Tyr Ile Ser  
                  580                 585                 590  
 Lys Met Lys Ser Glu Val Lys Ser Leu Val Asn Arg Ser Lys Gln Leu  
                  595                 600                 605  
 Glu Ser Ala Gln Met Asp Ser Asn Arg Lys Met Asn Ala Ser Glu Arg  
                  610                 615                 620  
 Glu Leu Ala Ala Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile  
                  625                 630                 635                 640  
 Lys Ser Leu Thr Asp Tyr Met Gln Asn Met Glu Gln Lys Arg Arg Gln  
                  645                 650                 655  
 Leu Glu Glu Ser Gln Asp Ser Leu Ser Glu Glu Leu Ala Lys Leu Arg  
                  660                 665                 670  
 Ala Gln Glu Lys Met His Glu Val Ser Phe Gln Asp Lys Glu Lys Glu  
                  675                 680                 685  
 His Leu Thr Arg Leu Gln Asp Ala Glu Glu Met Lys Lys Ala Leu Glu  
                  690                 695                 700  
 Gln Gln Met Glu Ser His Arg Glu Ala His Gln Lys Gln Leu Ser Arg  
                  705                 710                 715                 720  
 Leu Arg Asp Glu Ile Glu Glu Lys Gln Lys Ile Ile Asp Glu Ile Arg  
                  725                 730                 735  
 Asp Leu Asn Gln Lys Leu Gln Leu Glu Gln Glu Lys Leu Ser Ser Asp  
                  740                 745                 750  
 Tyr Asn Lys Leu Lys Ile Glu Asp Gln Glu Arg Glu Met Lys Leu Glu  
                  755                 760                 765  
 Lys Leu Leu Leu Asn Asp Lys Arg Glu Gln Ala Arg Glu Asp Leu  
                  770                 775                 780  
 Lys Gly Leu Glu Glu Thr Val Ser Arg Glu Leu Gln Thr Leu His Asn  
                  785                 790                 795                 800  
 Leu Arg Lys Leu Phe Val Gln Asp Leu Thr Thr Arg Val Lys Lys Ser  
                  805                 810                 815  
 Val Glu Leu Asp Asn Asp Asp Gly Gly Ser Ala Ala Gln Lys Gln  
                  820                 825                 830  
 Lys Ile Ser Phe Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His  
                  835                 840                 845  
 Lys Gln Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys  
                  850                 855                 860  
 Leu Glu Lys Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu  
                  865                 870                 875                 880  
 Ser Ala Leu Lys Glu Ala Lys Glu Asn Ala Met Arg Asp Arg Lys Arg  
                  885                 890                 895  
 Tyr Gln Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ala Lys Asn  
                  900                 905                 910  
 Met Ala Arg Arg Ala His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro  
                  915                 920                 925  
 Gly His Tyr Pro Ala Ser Ser Pro Thr Ala Val His Ala Ile Arg Gly  
                  930                 935                 940  
 Gly Gly Gly Ser Ser Ser Asn Ser Thr His Tyr Gln Lys  
                  945                 950                 955

<210> 17  
<211> 956

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 17

Met Ala Asp Pro Ala Glu Cys Ser Ile Lys Val Met Cys Arg Phe Arg  
 1 5 10 15  
 Pro Leu Asn Glu Ala Glu Ile Leu Arg Gly Asp Lys Phe Ile Pro Lys  
 20 25 30  
 Phe Lys Gly Glu Glu Thr Val Val Ile Gly Gln Gly Lys Pro Tyr Val  
 35 40 45  
 Phe Asp Arg Val Leu Pro Pro Asn Thr Thr Gln Glu Gln Val Tyr Asn  
 50 55 60  
 Ala Cys Ala Lys Gln Ile Val Lys Asp Val Leu Glu Gly Tyr Asn Gly  
 65 70 75 80  
 Thr Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met  
 85 90 95  
 Glu Gly Lys Leu His Asp Pro Gln Leu Met Gly Ile Ile Pro Arg Ile  
 100 105 110  
 Ala His Asp Ile Phe Asp His Ile Tyr Ser Met Asp Glu Asn Leu Glu  
 115 120 125  
 Phe His Ile Lys Val Ser Tyr Phe Glu Ile Tyr Leu Asp Lys Ile Arg  
 130 135 140  
 Asp Leu Leu Asp Val Ser Lys Thr Asn Leu Ala Val His Glu Asp Lys  
 145 150 155 160  
 Asn Arg Val Pro Tyr Val Lys Gly Cys Thr Glu Arg Phe Val Ser Ser  
 165 170 175  
 Pro Glu Glu Val Met Asp Val Ile Asp Glu Gly Lys Ala Asn Arg His  
 180 185 190  
 Val Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile  
 195 200 205  
 Phe Leu Ile Asn Ile Lys Gln Glu Asn Val Glu Thr Glu Lys Lys Leu  
 210 215 220  
 Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser  
 225 230 235 240  
 Lys Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn  
 245 250 255  
 Lys Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly  
 260 265 270  
 Thr Lys Thr His Val Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu  
 275 280 285  
 Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Ile Val Ile Cys Cys  
 290 295 300  
 Ser Pro Ser Val Phe Asn Glu Ala Glu Thr Lys Ser Thr Leu Met Phe  
 305 310 315 320  
 Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Val Ser Val Asn Leu Glu  
 325 330 335  
 Leu Thr Ala Glu Glu Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys  
 340 345 350  
 Asn Lys Ala Leu Lys Ser Val Leu Gln His Leu Glu Met Glu Leu Asn  
 355 360 365  
 Arg Trp Arg Asn Gly Glu Ala Val Pro Glu Asp Glu Gln Ile Ser Ala  
 370 375 380  
 Lys Asp His Lys Ser Leu Glu Pro Cys Asp Asn Thr Pro Ile Ile Asp

## 8471-010 b.txt

385	390	395	400
Asn Ile Thr Pro Val Val Asp Gly Ile Ser Ala Glu Lys Glu Lys Tyr			
405	410	415	
Asp Glu Glu Ile Thr Ser Leu Tyr Arg Gln Leu Asp Asp Lys Asp Asp			
420	425	430	
Glu Ile Asn Gln Gln Ser Gln Leu Ala Glu Lys Leu Lys Gln Gln Met			
435	440	445	
Leu Asp Gln Asp Glu Leu Leu Ala Ser Thr Arg Arg Asp Tyr Glu Lys			
450	455	460	
Ile Gln Glu Glu Leu Thr Arg Leu Gln Ile Glu Asn Glu Ala Ala Lys			
465	470	475	480
Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val Asn			
485	490	495	
Tyr Asp Gln Lys Ser Gln Glu Val Glu Asp Lys Thr Arg Ala Asn Glu			
500	505	510	
Gln Leu Thr Asp Glu Leu Ala Gln Lys Thr Thr Thr Leu Thr Thr Thr			
515	520	525	
Gln Arg Glu Leu Ser Gln Leu Gln Glu Leu Ser Asn His Gln Lys Lys			
530	535	540	
Arg Ala Thr Glu Ile Leu Asn Leu Leu Lys Asp Leu Gly Glu Ile			
545	550	555	560
Gly Gly Ile Ile Gly Thr Asn Asp Val Lys Thr Leu Ala Asp Val Asn			
565	570	575	
Gly Val Ile Glu Glu Glu Phe Thr Met Ala Arg Leu Tyr Ile Ser Lys			
580	585	590	
Met Lys Ser Glu Val Lys Ser Leu Val Asn Arg Ser Lys Gln Leu Glu			
595	600	605	
Ser Ala Gln Met Asp Ser Asn Arg Lys Met Asn Ala Ser Glu Arg Glu			
610	615	620	
Leu Ala Ala Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile Lys			
625	630	635	640
Ser Leu Thr Asp Tyr Met Gln Asn Met Glu Gln Lys Arg Arg Gln Leu			
645	650	655	
Glu Glu Ser Gln Asp Ser Leu Ser Glu Glu Leu Ala Lys Leu Arg Ala			
660	665	670	
Gln Glu Lys Met His Glu Val Ser Phe Gln Asp Lys Glu Lys Glu His			
675	680	685	
Leu Thr Arg Leu Gln Asp Ala Glu Glu Val Lys Lys Ala Leu Glu Gln			
690	695	700	
Gln Met Glu Ser His Arg Glu Ala His Gln Lys Gln Leu Ser Arg Leu			
705	710	715	720
Arg Asp Glu Ile Glu Glu Lys Gln Arg Ile Ile Asp Glu Ile Arg Asp			
725	730	735	
Leu Asn Gln Lys Leu Gln Leu Glu Gln Glu Arg Leu Ser Ser Asp Tyr			
740	745	750	
Asn Lys Leu Lys Ile Glu Asp Gln Glu Arg Glu Val Lys Leu Glu Lys			
755	760	765	
Leu Leu Leu Asn Asp Lys Arg Glu Gln Ala Arg Glu Asp Leu Lys			
770	775	780	
Gly Leu Glu Glu Thr Val Ser Ile Glu Leu Gln Thr Leu His Asn Leu			
785	790	795	800
Arg Lys Leu Phe Val Gln Asp Leu Thr Thr Arg Val Lys Lys Ser Val			
805	810	815	

## 8471-010 b.txt

Glu Leu Asp Ser Asp Asp Gly Gly Ser Ala Ala Gln Lys Gln Lys  
   820               825               830  
 Ile Ser Phe Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys  
   835               840               845  
 Gln Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu  
   850               855               860  
 Glu Lys Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser  
   865               870               875               880  
 Ala Leu Lys Glu Ala Lys Glu Asn Ala Met Arg Asp Arg Lys Arg Tyr  
   885               890               895  
 Gln Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ala Lys Asn Met  
   900               905               910  
 Ala Arg Arg Ala His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly  
   915               920               925  
 His Tyr Pro Ala Ser Ser Pro Thr Ala Val His Ala Val Arg Gly Gly  
   930               935               940  
 Gly Gly Gly Ser Ser Asn Ser Thr His Tyr Gln Lys  
   945               950               955

<210> 18  
 <211> 815  
 <212> PRT  
 <213> Caenorhabditis elegans

<400> 18

Met Glu Pro Arg Thr Asp Gly Ala Glu Cys Gly Val Gln Val Phe Cys  
   1               5               10               15  
 Arg Ile Arg Pro Leu Asn Lys Thr Glu Glu Lys Asn Ala Asp Arg Phe  
   20               25               30  
 Leu Pro Lys Phe Pro Ser Glu Asp Ser Ile Ser Leu Gly Gly Lys Val  
   35               40               45  
 Tyr Val Phe Asp Lys Val Phe Lys Pro Asn Thr Thr Gln Glu Gln Val  
   50               55               60  
 Tyr Lys Gly Ala Ala Tyr His Ile Val Gln Asp Val Leu Ser Gly Tyr  
   65               70               75               80  
 Asn Gly Thr Val Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His  
   85               90               95  
 Thr Met Glu Gly Val Ile Gly Asp Asn Gly Leu Ser Gly Ile Ile Pro  
   100              105              110  
 Arg Ile Val Ala Asp Ile Phe Asn His Ile Tyr Ser Met Asp Glu Asn  
   115              120              125  
 Leu Gln Phe His Ile Lys Val Ser Tyr Tyr Glu Ile Tyr Asn Glu Lys  
   130              135              140  
 Ile Arg Asp Leu Leu Asp Pro Glu Lys Val Asn Leu Ser Ile His Glu  
   145              150              155              160  
 Asp Lys Asn Arg Val Pro Tyr Val Lys Gly Ala Thr Glu Arg Phe Val  
   165              170              175  
 Gly Gly Pro Asp Glu Val Leu Gln Ala Ile Glu Asp Gly Lys Ser Asn  
   180              185              190  
 Arg Met Val Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His  
   195              200              205  
 Ser Val Phe Leu Ile Thr Val Lys Gln Glu His Gln Thr Thr Lys Lys  
   210              215              220

## 8471-010 b.txt

Gln Leu Thr Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys  
 225 230 235 240  
 Val Ser Lys Thr Gly Ala Gln Gly Thr Val Leu Glu Glu Ala Lys Asn  
 245 250 255  
 Ile Asn Lys Ser Leu Thr Ala Leu Gly Ile Val Ile Ser Ala Leu Ala  
 260 265 270  
 Glu Gly Thr Lys Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr Arg  
 275 280 285  
 Ile Leu Gln Glu Ser Leu Gly Gly Asn Ser Arg Thr Thr Val Ile Ile  
 290 295 300  
 Cys Ala Ser Pro Ser His Phe Asn Glu Ala Glu Thr Lys Ser Thr Leu  
 305 310 315 320  
 Leu Phe Gly Ala Arg Ala Lys Thr Ile Lys Asn Val Val Gln Ile Asn  
 325 330 335  
 Glu Glu Leu Thr Ala Glu Glu Trp Lys Arg Arg Tyr Glu Lys Glu Lys  
 340 345 350  
 Glu Lys Asn Thr Arg Leu Ala Ala Leu Leu Gln Ala Ala Ala Leu Glu  
 355 360 365  
 Leu Ser Arg Trp Arg Ala Gly Glu Ser Val Ser Glu Val Glu Trp Val  
 370 375 380  
 Asn Leu Ser Asp Ser Ala Gln Met Ala Val Ser Glu Val Ser Gly Gly  
 385 390 395 400  
 Ser Thr Pro Leu Met Glu Arg Ser Ile Ala Pro Ala Pro Pro Met Leu  
 405 410 415  
 Thr Ser Thr Thr Gly Pro Ile Thr Asp Glu Glu Lys Lys Lys Tyr Glu  
 420 425 430  
 Glu Glu Arg Val Lys Leu Tyr Gln Gln Leu Asp Glu Lys Asp Asp Glu  
 435 440 445  
 Ile Gln Lys Val Ser Gln Glu Leu Glu Lys Leu Arg Gln Gln Val Leu  
 450 455 460  
 Leu Gln Glu Glu Ala Leu Gly Thr Met Arg Glu Asn Glu Glu Leu Ile  
 465 470 475 480  
 Arg Glu Glu Asn Asn Arg Phe Gln Lys Glu Ala Glu Asp Lys Gln Gln  
 485 490 495  
 Glu Gly Lys Glu Met Met Thr Ala Leu Glu Glu Ile Ala Val Asn Leu  
 500 505 510  
 Asp Val Arg Gln Ala Glu Cys Glu Lys Leu Lys Arg Glu Leu Glu Val  
 515 520 525  
 Val Gln Glu Asp Asn Gln Ser Leu Glu Asp Arg Met Asn Gln Ala Thr  
 530 535 540  
 Ser Leu Leu Asn Ala His Leu Asp Glu Cys Gly Pro Lys Ile Arg His  
 545 550 555 560  
 Phe Lys Glu Gly Ile Tyr Asn Val Ile Arg Glu Phe Asn Ile Ala Asp  
 565 570 575  
 Ile Ala Ser Gln Asn Asp Gln Leu Pro Asp His Asp Leu Leu Asn His  
 580 585 590  
 Val Arg Ile Gly Val Ser Lys Leu Phe Ser Glu Tyr Ser Ala Ala Lys  
 595 600 605  
 Glu Ser Ser Thr Ala Ala Glu His Asp Ala Glu Ala Lys Leu Ala Ala  
 610 615 620  
 Asp Val Ala Arg Val Glu Ser Gly Gln Asp Ala Gly Arg Met Lys Gln  
 625 630 635 640  
 Leu Leu Val Lys Asp Gln Ala Ala Lys Glu Ile Lys Pro Leu Thr Asp

## 8471-010 b.txt

645	650	655
Arg Val Asn Met Glu Leu Thr Thr	Lys Asn Leu Lys	Glu Phe
660	665	670
Met Arg Val Leu Val Ala Arg Cys	Gln Ala Asn Gln	Asp Thr Glu Gly
675	680	685
Glu Asp Ser Leu Ser Gly Pro Ala Gln Lys	Gln Arg Ile Gln	Phe Leu
690	695	700
Glu Asn Asn Leu Asp Lys Leu Thr Lys	Val His Lys Gln	Leu Val Arg
705	710	715
Asp Asn Ala Asp Leu Arg Val Glu Leu	Pro Lys Met Glu Ala Arg	Leu
725	730	735
Arg Gly Arg Glu Asp Arg Ile Lys Ile	Leu Glu Thr Ala	Leu Arg Asp
740	745	750
Ser Lys Gln Arg Ser Gln Ala Glu Arg Lys	Lys Tyr Gln Gln	Glu Val
755	760	765
Glu Arg Ile Lys Glu Ala Val Arg Gln Arg	Asn Met Arg Arg	Met Asn
770	775	780
Ala Pro Gln Ile Val Lys Pro Ile Arg Pro	Gly Gln Val Tyr Thr	Ser
785	790	795
Pro Ser Ala Gly Met Ser Gln Gly Ala Pro	Asn Gly Ser Asn Ala	800
805	810	815

&lt;210&gt; 19

&lt;211&gt; 975

&lt;212&gt; PRT

&lt;213&gt; Drosophilia melanogaster

&lt;400&gt; 19

Met Ser Ala Glu Arg Glu Ile Pro Ala Glu Asp Ser	Ile Lys Val Val		
1	5	10	15
Cys Arg Phe Arg Pro Leu Asn Asp Ser	Glu Glu Lys Ala Gly	Ser Lys	
20	25	30	
Phe Val Val Lys Phe Pro Asn Asn Val Glu Glu Asn	Cys Ile Ser Ile		
35	40	45	
Ala Gly Lys Val Tyr Leu Phe Asp Lys Val Phe	Lys Pro Asn Ala Ser		
50	55	60	
Gln Glu Lys Val Tyr Asn Glu Ala Ala Lys	Ser Ile Val Thr Asp Val		
65	70	75	80
Leu Ala Gly Tyr Asn Gly Thr Ile Phe Ala Tyr	Gly Gln Thr Ser Ser		
85	90	95	
Gly Lys Thr His Thr Met Glu Gly Val Ile Gly Asp	Ser Val Lys Gln		
100	105	110	
Gly Ile Ile Pro Arg Ile Val Asn Asp Ile Phe Asn	His Ile Tyr Ala		
115	120	125	
Met Glu Val Asn Leu Glu Phe His Ile Lys Val	Ser Tyr Tyr Glu Ile		
130	135	140	
Tyr Met Asp Lys Ile Arg Asp Leu Leu Asp Val	Ser Lys Val Asn Leu		
145	150	155	160
Ser Val His Glu Asp Lys Asn Arg Val Pro	Tyr Val Lys Gly Ala Thr		
165	170	175	
Glu Arg Phe Val Ser Ser Pro Glu Asp Val Phe	Glu Val Ile Glu Glu		
180	185	190	
Gly Lys Ser Asn Arg His Ile Ala Val Thr Asn Met	Asn Glu His Ser		

## 8471-010 b.txt

195	200	205
Ser Arg Ser His Ser Val Phe Leu Ile Asn Val Lys Gln Glu Asn Leu		
210	215	220
Glu Asn Gln Lys Lys Leu Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala		
225	230	235
Gly Ser Glu Lys Val Ser Lys Thr Gly Ala Glu Gly Thr Val Leu Asp		
245	250	255
Glu Ala Lys Asn Ile Asn Lys Ser Leu Ser Ala Leu Gly Asn Val Ile		
260	265	270
Ser Ala Leu Ala Asp Gly Asn Lys Thr His Ile Pro Tyr Arg Asp Ser		
275	280	285
Lys Leu Thr Arg Ile Leu Gln Glu Ser Leu Gly Gly Asn Ala Arg Thr		
290	295	300
Thr Ile Val Ile Cys Cys Ser Pro Ala Ser Phe Asn Glu Ser Glu Thr		
305	310	315
Lys Ser Thr Leu Asp Phe Gly Arg Arg Ala Lys Thr Val Lys Asn Val		
325	330	335
Val Cys Val Asn Glu Glu Leu Thr Ala Glu Glu Trp Lys Arg Arg Tyr		
340	345	350
Glu Lys Glu Lys Glu Lys Asn Ala Arg Leu Lys Gly Lys Val Glu Lys		
355	360	365
Leu Glu Ile Glu Leu Ala Arg Trp Arg Ala Gly Glu Thr Val Lys Ala		
370	375	380
Glu Glu Gln Ile Asn Met Glu Asp Leu Met Glu Ala Ser Thr Pro Asn		
385	390	395
Leu Glu Val Glu Ala Ala Gln Thr Ala Ala Ala Glu Ala Ala Leu Ala		
405	410	415
Ala Gln Arg Thr Ala Leu Ala Asn Met Ser Ala Ser Val Ala Val Asn		
420	425	430
Glu Gln Ala Arg Leu Ala Thr Glu Cys Glu Arg Leu Tyr Gln Gln Leu		
435	440	445
Asp Asp Lys Asp Glu Glu Ile Asn Gln Gln Ser Gln Tyr Ala Glu Gln		
450	455	460
Leu Lys Glu Gln Val Met Glu Gln Glu Glu Leu Ile Ala Asn Ala Arg		
465	470	475
Arg Glu Tyr Glu Thr Leu Gln Ser Glu Met Ala Arg Ile Gln Gln Glu		
485	490	495
Asn Glu Ser Ala Lys Glu Glu Val Lys Glu Val Leu Gln Ala Leu Glu		
500	505	510
Glu Leu Ala Val Asn Tyr Asp Gln Lys Ser Gln Glu Ile Asp Asn Lys		
515	520	525
Asn Lys Asp Ile Asp Ala Leu Asn Glu Glu Leu Gln Gln Lys Gln Ser		
530	535	540
Val Phe Asn Ala Ala Ser Thr Glu Leu Gln Leu Lys Asp Met Ser		
545	550	555
Ser His Gln Lys Lys Arg Ile Thr Glu Met Leu Thr Asn Leu Leu Arg		
565	570	575
Asp Leu Gly Glu Val Gly Gln Ala Ile Ala Pro Gly Glu Ser Ser Ile		
580	585	590
Asp Leu Lys Met Ser Ala Leu Ala Gly Thr Asp Ala Ser Lys Val Glu		
595	600	605
Glu Asp Phe Thr Met Ala Arg Leu Phe Ile Ser Lys Met Lys Thr Glu		
610	615	620

## 8471-010 b.txt

Ala Lys Asn Ile Ala Gln Arg Cys Ser Asn Met Glu Thr Gln Gln Ala  
 625 630 635 640  
 Asp Ser Asn Lys Lys Ile Ser Glu Tyr Glu Lys Asp Leu Gly Glu Tyr  
 645 650 655  
 Arg Leu Leu Ile Ser Gln His Glu Ala Arg Met Lys Ser Leu Gln Glu  
 660 665 670  
 Ser Met Arg Glu Ala Glu Asn Lys Lys Arg Thr Leu Glu Glu Gln Ile  
 675 680 685  
 Asp Ser Leu Arg Glu Glu Cys Ala Lys Leu Lys Ala Ala Glu His Val  
 690 695 700  
 Ser Ala Val Asn Ala Glu Glu Lys Gln Arg Ala Glu Glu Leu Arg Ser  
 705 710 715 720  
 Met Phe Asp Ser Gln Met Asp Glu Leu Arg Glu Ala His Thr Arg Gln  
 725 730 735  
 Val Ser Glu Leu Arg Asp Glu Ile Ala Ala Lys Gln His Glu Met Asp  
 740 745 750  
 Glu Met Lys Asp Val His Gln Lys Leu Leu Leu Ala His Gln Gln Met  
 755 760 765  
 Thr Ala Asp Tyr Glu Lys Val Arg Gln Glu Asp Ala Glu Lys Ser Ser  
 770 775 780  
 Glu Leu Gln Asn Ile Ile Leu Thr Asn Glu Arg Arg Glu Gln Ala Arg  
 785 790 795 800  
 Lys Asp Leu Lys Gly Leu Glu Asp Thr Val Ala Lys Glu Leu Gln Thr  
 805 810 815  
 Leu His Asn Leu Arg Lys Leu Phe Val Gln Asp Leu Gln Gln Arg Ile  
 820 825 830  
 Arg Lys Asn Val Val Asn Glu Ser Glu Glu Asp Gly Gly Ser Leu  
 835 840 845  
 Ala Gln Lys Gln Lys Ile Ser Phe Leu Glu Asn Asn Leu Asp Gln Leu  
 850 855 860  
 Thr Lys Val His Lys Gln Leu Val Arg Asp Asn Ala Asp Leu Arg Cys  
 865 870 875 880  
 Glu Leu Pro Lys Leu Glu Lys Arg Leu Arg Cys Thr Met Glu Arg Val  
 885 890 895  
 Lys Ala Leu Glu Thr Ala Leu Lys Glu Ala Lys Glu Gly Ala Met Arg  
 900 905 910  
 Asp Arg Lys Arg Tyr Gln Tyr Glu Val Asp Arg Ile Lys Glu Ala Val  
 915 920 925  
 Arg Gln Lys His Leu Gly Arg Arg Gly Pro Gln Ala Gln Ile Ala Lys  
 930 935 940  
 Pro Ile Arg Ser Gly Gln Gly Ala Ile Ala Ile Arg Gly Gly Gly Ala  
 945 950 955 960  
 Val Gly Gly Pro Ser Pro Leu Ala Gln Val Asn Pro Val Asn Ser  
 965 970 975

&lt;210&gt; 20

&lt;211&gt; 963

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 20

Met Ala Asp Leu Ala Glu Cys Asn Ile Lys Val Met Cys Arg Phe Arg  
 1 5 10 15

## 8471-010 b.txt

Pro Leu Asn Glu Ser Glu Val Asn Arg Gly Asp Lys Tyr Ile Ala Lys  
     20                 25                 30  
 Phe Gln Gly Glu Asp Thr Val Val Ile Ala Ser Lys Pro Tyr Ala Phe  
     35                 40                 45  
 Asp Arg Val Phe Gln Ser Ser Thr Ser Gln Glu Gln Val Tyr Asn Asp  
     50                 55                 60  
 Cys Ala Lys Lys Ile Val Lys Asp Val Leu Glu Gly Tyr Asn Gly Thr  
     65                 70                 75                 80  
 Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met Glu  
     85                 90                 95  
 Gly Lys Leu His Asp Pro Glu Gly Met Gly Ile Ile Pro Arg Ile Val  
     100                105                110  
 Gln Asp Ile Phe Asn Tyr Ile Tyr Ser Met Asp Glu Asn Leu Glu Phe  
     115                120                125  
 His Ile Lys Val Ser Tyr Phe Glu Ile Tyr Leu Asp Lys Ile Arg Asp  
     130                135                140  
 Leu Leu Asp Val Ser Lys Thr Asn Leu Ser Val His Glu Asp Lys Asn  
     145                150                155                160  
 Arg Val Pro Tyr Val Lys Gly Cys Thr Glu Arg Phe Val Cys Ser Pro  
     165                170                175  
 Asp Glu Val Met Asp Thr Ile Asp Glu Gly Lys Ser Asn Arg His Val  
     180                185                190  
 Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile Phe  
     195                200                205  
 Leu Ile Asn Val Lys Gln Glu Asn Thr Gln Thr Glu Gln Lys Leu Ser  
     210                215                220  
 Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser Lys  
     225                230                235                240  
 Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn Lys  
     245                250                255  
 Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly Ser  
     260                265                270  
 Thr Tyr Val Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu Gln Asp  
     275                280                285  
 Ser Leu Gly Gly Asn Cys Arg Thr Thr Ile Val Ile Cys Cys Ser Pro  
     290                295                300  
 Ser Ser Tyr Asn Glu Ser Glu Thr Lys Ser Thr Leu Leu Phe Gly Gln  
     305                310                315                320  
 Arg Ala Lys Thr Ile Lys Asn Thr Val Cys Val Asn Val Glu Leu Thr  
     325                330                335  
 Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys Asn Lys  
     340                345                350  
 Ile Leu Arg Asn Thr Ile Gln Trp Leu Glu Asn Glu Leu Asn Arg Trp  
     355                360                365  
 Arg Asn Gly Glu Thr Val Pro Ile Asp Glu Gln Phe Asp Lys Glu Lys  
     370                375                380  
 Ala Asn Leu Glu Ala Phe Thr Val Asp Lys Asp Ile Thr Leu Thr Asn  
     385                390                395                400  
 Asp Lys Pro Ala Thr Ala Ile Gly Val Ile Gly Asn Phe Thr Asp Ala  
     405                410                415  
 Glu Arg Arg Lys Cys Glu Glu Glu Ile Ala Lys Leu Tyr Lys Gln Leu  
     420                425                430  
 Asp Asp Lys Asp Glu Glu Ile Asn Gln Gln Ser Gln Leu Val Glu Lys

## 8471-010 b.txt

435	440	445
Leu Lys Thr Gln Met Leu Asp Gln Glu Glu Leu Leu Ala Ser Thr Arg		
450	455	460
Arg Asp Gln Asp Asn Met Gln Ala Glu Leu Asn Arg Leu Gln Ala Glu		
465	470	475
Asn Asp Ala Ser Lys Glu Glu Val Lys Glu Val Leu Gln Ala Leu Glu		
485	490	495
Glu Leu Ala Val Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Asp Lys		
500	505	510
Thr Lys Glu Tyr Glu Leu Leu Ser Asp Glu Leu Asn Gln Lys Ser Ala		
515	520	525
Thr Leu Ala Ser Ile Asp Ala Glu Leu Gln Lys Leu Lys Glu Met Thr		
530	535	540
Asn His Gln Lys Lys Arg Ala Ala Glu Met Met Ala Ser Leu Leu Lys		
545	550	555
Asp Leu Ala Glu Ile Gly Ile Ala Val Gly Asn Asn Asp Val Lys Gln		
565	570	575
Pro Glu Gly Thr Gly Met Ile Asp Glu Glu Phe Thr Val Ala Arg Leu		
580	585	590
Tyr Ile Ser Lys Met Lys Ser Glu Val Lys Thr Met Val Lys Arg Cys		
595	600	605
Lys Gln Leu Glu Ser Thr Gln Thr Glu Ser Asn Lys Lys Met Glu Glu		
610	615	620
Asn Glu Lys Glu Leu Ala Ala Cys Gln Leu Arg Ile Ser Gln His Glu		
625	630	635
Ala Lys Ile Lys Ser Leu Thr Glu Tyr Leu Gln Asn Val Glu Gln Lys		
645	650	655
Lys Arg Gln Leu Glu Glu Ser Val Asp Ala Leu Ser Glu Glu Leu Val		
660	665	670
Gln Leu Arg Ala Gln Glu Lys Val His Glu Met Glu Lys Glu His Leu		
675	680	685
Asn Lys Val Gln Thr Ala Asn Glu Val Lys Gln Ala Val Glu Gln Gln		
690	695	700
Ile Gln Ser His Arg Glu Thr His Gln Lys Gln Ile Ser Ser Leu Arg		
705	710	715
Asp Glu Val Glu Ala Lys Ala Lys Leu Ile Thr Asp Leu Gln Asp Gln		
725	730	735
Asn Gln Lys Met Met Leu Glu Gln Glu Arg Leu Arg Val Glu His Glu		
740	745	750
Lys Leu Lys Ala Thr Asp Gln Glu Lys Ser Arg Lys Leu His Glu Leu		
755	760	765
Thr Val Met Gln Asp Arg Arg Glu Gln Ala Arg Gln Asp Leu Lys Gly		
770	775	780
Leu Glu Glu Thr Val Ala Lys Glu Leu Gln Thr Leu His Asn Leu Arg		
785	790	795
800		
Lys Leu Phe Val Gln Asp Leu Ala Thr Arg Val Lys Lys Ser Ala Glu		
805	810	815
Ile Asp Ser Asp Asp Thr Gly Gly Ser Ala Ala Gln Lys Gln Lys Ile		
820	825	830
Ser Phe Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln		
835	840	845
Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu		
850	855	860

## 8471-010 b.txt

Lys Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser Ala  
 865 870 875 880  
 Leu Lys Glu Ala Lys Glu Asn Ala Ser Arg Asp Arg Lys Arg Tyr Gln  
 885 890 895  
 Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ser Lys Asn Met Ala  
 900 905 910  
 Arg Arg Gly His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly Gln  
 915 920 925  
 His Pro Ala Ala Ser Pro Thr His Pro Ser Ala Ile Arg Gly Gly Gly  
 930 935 940  
 Ala Phe Val Gln Asn Ser Gln Pro Val Ala Val Arg Gly Gly Gly Gly  
 945 950 955 960  
 Lys Gln Val

<210> 21  
<211> 967  
<212> PRT  
<213> Loligo pealeii

<400> 21  
 Met Asp Val Ala Ser Glu Cys Asn Ile Lys Val Ile Cys Arg Val Arg  
 1 5 10 15  
 Pro Leu Asn Glu Ala Glu Glu Arg Ala Gly Ser Lys Phe Ile Leu Lys  
 20 25 30  
 Phe Pro Thr Asp Asp Ser Ile Ser Ile Ala Gly Lys Val Phe Val Phe  
 35 40 45  
 Asp Lys Val Leu Lys Pro Asn Val Ser Gln Glu Tyr Val Tyr Asn Val  
 50 55 60  
 Gly Ala Lys Pro Ile Val Ala Asp Val Leu Ser Gly Cys Asn Gly Thr  
 65 70 75 80  
 Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met Glu  
 85 90 95  
 Gly Val Leu Asp Lys Pro Ser Met His Gly Ile Ile Pro Arg Ile Val  
 100 105 110  
 Gln Asp Ile Phe Asn Tyr Ile Tyr Gly Met Asp Glu Asn Leu Glu Phe  
 115 120 125  
 His Ile Lys Ile Ser Tyr Tyr Glu Ile Tyr Leu Asp Lys Ile Arg Asp  
 130 135 140  
 Leu Leu Asp Val Thr Lys Thr Asn Leu Ala Val His Glu Asp Lys Asn  
 145 150 155 160  
 Arg Val Pro Phe Val Lys Gly Ala Thr Glu Arg Phe Val Ser Ser Pro  
 165 170 175  
 Glu Glu Val Met Glu Val Ile Asp Glu Gly Lys Asn Asn Arg His Val  
 180 185 190  
 Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Val Phe  
 195 200 205  
 Leu Ile Asn Val Lys Gln Glu Asn Val Glu Thr Gln Lys Lys Leu Ser  
 210 215 220  
 Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser Lys  
 225 230 235 240  
 Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn Lys  
 245 250 255

## 8471-010 b.txt

Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Asp Gly Asn  
           260                 265                 270  
 Lys Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr Arg Ile Leu Gln  
           275                 280                 285  
 Glu Ser Leu Gly Gly Asn Ala Arg Thr Thr Met Val Ile Cys Cys Ser  
           290                 295                 300  
 Pro Ala Ser Tyr Asn Glu Ser Glu Thr Lys Ser Thr Leu Leu Phe Gly  
           305                 310                 315                 320  
 Gln Arg Ala Lys Thr Ile Lys Asn Val Val Ser Val Asn Glu Glu Leu  
           325                 330                 335  
 Thr Ala Asp Glu Trp Lys Arg Arg Tyr Glu Lys Glu Lys Glu Arg Val  
           340                 345                 350  
 Thr Lys Leu Lys Ala Thr Met Ala Lys Leu Glu Ala Glu Leu Gln Arg  
           355                 360                 365  
 Trp Arg Thr Gly Gln Ala Val Ser Val Glu Glu Gln Val Asp Leu Lys  
           370                 375                 380  
 Glu Asp Val Pro Ala Glu Ser Pro Ala Thr Ser Thr Thr Ser Leu Ala  
           385                 390                 395                 400  
 Gly Gly Leu Ile Ala Ser Met Asn Glu Gly Asp Arg Thr Gln Leu Glu  
           405                 410                 415  
 Glu Glu Arg Leu Lys Leu Tyr Gln Gln Leu Asp Asp Lys Asp Asp Glu  
           420                 425                 430  
 Ile Asn Asn Gln Ser Gln Leu Ile Glu Lys Leu Lys Glu Gln Met Met  
           435                 440                 445  
 Glu Gln Glu Asp Leu Ile Ala Gln Ser Arg Arg Asp Tyr Glu Asn Leu  
           450                 455                 460  
 Gln Gln Asp Met Ser Arg Ile Gln Ala Asp Asn Glu Ser Ala Lys Asp  
           465                 470                 475                 480  
 Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Met Asn Tyr  
           485                 490                 495  
 Asp Gln Lys Ser Gln Glu Val Glu Asp Lys Asn Lys Glu Asn Glu Asn  
           500                 505                 510  
 Leu Ser Glu Glu Leu Asn Gln Lys Leu Ser Thr Leu Asn Ser Leu Gln  
           515                 520                 525  
 Asn Glu Leu Asp Gln Leu Lys Asp Ser Ser Met His His Arg Lys Arg  
           530                 535                 540  
 Val Thr Asp Met Met Ile Asn Leu Leu Lys Asp Leu Gly Asp Ile Gly  
           545                 550                 555                 560  
 Thr Ile Val Gly Gly Asn Ala Ala Glu Thr Lys Pro Thr Ala Gly Ser  
           565                 570                 575  
 Gly Glu Lys Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser  
           580                 585                 590  
 Lys Met Lys Ser Glu Val Lys Thr Leu Val Ser Arg Asn Asn Gln Leu  
           595                 600                 605  
 Glu Asn Thr Gln Gln Asp Asn Phe Lys Lys Ile Glu Thr His Glu Lys  
           610                 615                 620  
 Asp Leu Ser Asn Cys Lys Leu Leu Ile Gln Gln His Glu Ala Lys Met  
           625                 630                 635                 640  
 Ala Ser Leu Gln Glu Ala Ile Lys Asp Ser Glu Asn Lys Lys Arg Met  
           645                 650                 655  
 Leu Glu Asp Asn Val Asp Ser Leu Asn Glu Glu Tyr Ala Lys Leu Lys  
           660                 665                 670  
 Ala Gln Glu Gln Met His Leu Ala Ala Leu Ser Glu Arg Glu Lys Glu

## 8471-010 b.txt

675	680	685
Thr Ser Gln Ala Ser Glu	Thr Arg Glu Val Leu	Glu Lys Gln Met Glu
690	695	700
Met His Arg Glu Gln His	Gln Lys Gln Leu Gln	Ser Leu Arg Asp Glu
705	710	715
Ile Ser Glu Lys Gln Ala	Thr Val Asp Asn Leu	Lys Asp Asp Asn Gln
725	730	735
Arg Leu Ser Leu Ala Leu	Glu Lys Leu Gln Ala	Asp Tyr Asp Lys Leu
740	745	750
Lys Gln Glu Glu Val Glu	Lys Ala Ala Lys Leu Ala	Asp Leu Ser Leu
755	760	765
Gln Ile Asp Arg Arg Glu	Gln Ala Lys Gln Asp	Leu Lys Gly Leu Glu
770	775	780
Glu Thr Val Ala Lys Glu	Leu Gln Thr Leu His	Asn Leu Arg Lys Leu
785	790	795
Phe Val Gln Asp Leu	Gln Asn Lys Val Lys	Ser Cys Ser Lys Thr
805	810	815
Glu Glu Glu Asp Glu Asp	Thr Gly Gly Asn Ala Ala	Gln Lys Gln Lys
820	825	830
Ile Ser Phe Leu Glu Asn	Asn Leu Glu Gln Leu	Thr Lys Val His Lys
835	840	845
Gln Leu Val Arg Asp Asn	Ala Asp Leu Arg	Cys Glu Leu Pro Lys Leu
850	855	860
Glu Lys Arg Leu Arg Ala	Thr Met Glu Arg Val	Lys Ser Leu Glu Ser
865	870	875
Ala Leu Lys Asp Ala Lys	Glu Gly Ala Met Arg	Asp Arg Lys Arg Tyr
885	890	895
Gln His Glu Val Asp Arg	Ile Lys Glu Ala Val	Arg Gln Lys Asn Leu
900	905	910
Ala Arg Arg Gly His Ala	Ala Gln Ile Ala Lys	Pro Ile Arg Pro Gly
915	920	925
Gln His Gln Ser Val Ser	Pro Ala Gln Ala	Ala Ile Arg Gly Gly
930	935	940
Gly Gly Leu Ser Gln Asn	Gly Pro Met Ile Thr	Ser Thr Pro Ile Arg
945	950	955
Met Ala Pro Glu Ser Lys	Ala	
	965	

<210> 22  
<211> 963  
<212> PRT  
<213> Mus musculus

<400> 22  
Met Ala Asp Pro Ala Glu Cys Asn Ile Lys Val Met Cys Arg Phe Arg  
1 5 10 15  
Pro Leu Asn Glu Ser Glu Val Asn Arg Gly Asp Lys Tyr Val Ala Lys  
20 25 30  
Phe Gln Gly Glu Asp Thr Val Val Ile Ala Ser Lys Pro Tyr Ala Phe  
35 40 45  
Asp Arg Val Phe Gln Ser Ser Thr Ser Gln Glu Gln Val Tyr Asn Asp  
50 55 60  
Cys Ala Lys Lys Ile Val Lys Asp Val Leu Glu Gly Tyr Asn Gly Thr

## 8471-010 b.txt

65	70	75	80
Ile Phe Ala Tyr Gly Gln Thr Ser Ser	Gly Lys Thr His Thr Met	Glu	
85	90	95	
Gly Lys Leu His Asp Pro Glu Gly Met	Gly Ile Ile Pro Arg	Ile Val	
100	105	110	
Gln Asp Ile Phe Asn Tyr Ile Tyr Ser Met Asp Glu Asn	Leu Glu Phe		
115	120	125	
His Ile Lys Val Ser Tyr Phe Glu Ile Tyr Leu Asp	Lys Ile Arg Asp		
130	135	140	
Leu Leu Asp Val Ser Lys Thr Asn Leu Ser Val His	Glu Asp Lys Asn		
145	150	155	160
Arg Val Pro Tyr Val Lys Gly Cys Thr Glu Arg	Phe Val Cys Ser	Pro	
165	170	175	
Asp Glu Val Met Asp Thr Ile Asp Glu Gly Lys Ser	Asn Arg His Val		
180	185	190	
Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser	His Ser Ile Phe		
195	200	205	
Leu Ile Asn Val Lys Gln Glu Asn Thr Gln Thr Glu	Gln Lys Leu Ser		
210	215	220	
Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser	Glu Lys Val Ser Lys		
225	230	235	240
Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys	Asn Ile Asn Lys		
245	250	255	
Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu	Ala Glu Gly Ser		
260	265	270	
Thr Tyr Val Pro Tyr Arg Asp Ser Lys Met Thr Arg	Ile Leu Gln Asp		
275	280	285	
Ser Leu Gly Gly Asn Cys Arg Thr Thr Ile Val Ile	Cys Cys Ser Pro		
290	295	300	
Ser Ser Tyr Asn Glu Ser Glu Thr Lys Ser Thr	Leu Leu Phe Gly Gln		
305	310	315	320
Arg Ala Lys Thr Ile Lys Asn Thr Val Cys Val Asn	Val Glu Leu Thr		
325	330	335	
Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys	Glu Lys Asn Lys		
340	345	350	
Thr Leu Arg Asn Thr Ile Gln Trp Leu Glu Asn	Glu Leu Asn Arg Trp		
355	360	365	
Arg Asn Gly Glu Thr Val Pro Ile Asp Glu Gln	Phe Asp Lys Glu Lys		
370	375	380	
Ala Asn Leu Glu Ala Phe Thr Ala Asp Lys Asp	Ile Ala Ile Thr Ser		
385	390	395	400
Asp Lys Gly Ala Ala Val Gly Met Ala Gly Ser	Phe Thr Asp Ala		
405	410	415	
Glu Arg Arg Lys Cys Glu Glu Leu Ala Lys Leu	Tyr Lys Gln Leu		
420	425	430	
Asp Asp Lys Asp Glu Glu Ile Asn Gln Gln Ser	Gln Leu Val Glu Lys		
435	440	445	
Leu Lys Thr Gln Met Leu Asp Gln Glu Glu Leu	Leu Ala Ser Thr Arg		
450	455	460	
Arg Asp Gln Asp Asn Met Gln Ala Glu Leu Asn	Arg Leu Gln Ala Glu		
465	470	475	480
Asn Asp Ala Ser Lys Glu Glu Val Lys Glu Val	Leu Gln Ala Leu Glu		
485	490	495	

## 8471-010 b.txt

Glu Leu Ala Val Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Asp Lys  
       500                 505                 510

Thr Lys Glu Tyr Glu Leu Leu Thr Asp Glu Phe Asn Gln Lys Ser Ala  
       515                 520                 525

Thr Leu Ala Ser Ile Asp Ala Glu Leu Gln Lys Leu Lys Glu Met Thr  
       530                 535                 540

Asn His Gln Lys Lys Arg Ala Ala Glu Met Met Ala Ser Leu Leu Lys  
       545                 550                 555                 560

Asp Leu Ala Glu Ile Gly Ile Ala Val Gly Asn Asn Asp Val Lys Gln  
       565                 570                 575

Pro Glu Gly Thr Gly Met Ile Asp Glu Glu Phe Thr Val Ala Arg Leu  
       580                 585                 590

Tyr Ile Ser Lys Met Lys Ser Glu Val Lys Thr Met Val Lys Arg Cys  
       595                 600                 605

Lys Gln Leu Glu Ser Thr Gln Thr Glu Ser Asn Lys Lys Met Glu Glu  
       610                 615                 620

Asn Glu Lys Glu Leu Ala Ala Cys Gln Leu Arg Ile Ser Gln His Glu  
       625                 630                 635                 640

Ala Lys Ile Lys Ser Leu Thr Glu Tyr Leu Gln Asn Asp Glu Gln Lys  
       645                 650                 655

Lys Arg Gln Leu Glu Glu Ser Leu Asp Ser Leu Gly Glu Glu Leu Val  
       660                 665                 670

Gln Leu Arg Ala Gln Glu Lys Val His Glu Met Glu Lys Glu His Leu  
       675                 680                 685

Asn Lys Val Gln Thr Ala Asn Glu Val Lys Gln Ala Val Glu Gln Gln  
       690                 695                 700

Ile Gln Ser His Arg Glu Thr His Gln Lys Gln Ile Ser Ser Leu Arg  
       705                 710                 715                 720

Asp Glu Val Glu Ala Lys Glu Lys Leu Ile Thr Asp Leu Gln Asp Gln  
       725                 730                 735

Asn Gln Lys Met Val Leu Glu Thr Glu Arg Leu Arg Val Glu His Glu  
       740                 745                 750

Arg Leu Lys Ala Thr Asp Gln Glu Lys Ser Arg Lys Leu His Glu Leu  
       755                 760                 765

Thr Val Met Gln Asp Arg Arg Glu Gln Ala Arg Gln Asp Leu Lys Gly  
       770                 775                 780

Leu Glu Glu Thr Val Ala Lys Glu Leu Gln Thr Leu His Asn Leu Arg  
       785                 790                 795                 800

Lys Leu Phe Val Gln Asp Leu Ala Thr Arg Val Lys Lys Ser Ala Glu  
       805                 810                 815

Val Asp Ser Asp Asp Thr Gly Gly Ser Ala Ala Gln Lys Gln Lys Ile  
       820                 825                 830

Ser Phe Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln  
       835                 840                 845

Leu Val Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu  
       850                 855                 860

Phe Arg Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Ser Ala  
       865                 870                 875                 880

Leu Lys Glu Ala Lys Glu Asn Ala Ser Arg Asp Arg Lys Arg Tyr Gln  
       885                 890                 895

Gln Glu Val Asp Arg Ile Lys Glu Ala Val Arg Ser Lys Asn Met Ala  
       900                 905                 910

Arg Arg Gly His Ser Ala Gln Ile Ala Lys Pro Ile Arg Pro Gly Gln

## 8471-010 b.txt

915	920	925
His Pro Ala Ala Ser Pro Thr His Pro Gly Thr Val Arg Gly Gly Gly		
930	935	940
Ser Phe Val Gln Asn Asn Gln Pro Val Gly Leu Arg Gly Gly Gly Gly		
945	950	955
Lys Gln Ser		960

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<211> 928  
<212> PRT  
<213> Neurospora crassa

<400> 23			
Met Ser Ser Ser Ala Asn Ser Ile Lys Val Val Ala Arg Phe Arg Pro			
1	5	10	15
Gln Asn Arg Val Glu Ile Glu Ser Gly Gly Gln Pro Ile Val Thr Phe			
20	25	30	
Gln Gly Pro Asp Thr Cys Thr Val Asp Ser Lys Glu Ala Gln Gly Ser			
35	40	45	
Phe Thr Phe Asp Arg Val Phe Asp Met Ser Cys Lys Gln Ser Asp Ile			
50	55	60	
Phe Asp Phe Ser Ile Lys Pro Thr Val Asp Asp Ile Leu Asn Gly Tyr			
65	70	75	80
Asn Gly Thr Val Phe Ala Tyr Gly Gln Thr Gly Ala Gly Lys Ser Tyr			
85	90	95	
Thr Met Met Gly Thr Ser Ile Asp Asp Pro Asp Gly Arg Gly Val Ile			
100	105	110	
Pro Arg Ile Val Glu Gln Ile Phe Thr Ser Ile Leu Ser Ser Ala Ala			
115	120	125	
Asn Ile Glu Tyr Thr Val Arg Val Ser Tyr Met Glu Ile Tyr Met Glu			
130	135	140	
Arg Ile Arg Asp Leu Leu Ala Pro Gln Asn Asp Asn Leu Pro Val His			
145	150	155	160
Glu Glu Lys Asn Arg Gly Val Tyr Val Lys Gly Leu Leu Glu Ile Tyr			
165	170	175	
Val Ser Ser Val Gln Glu Val Tyr Glu Val Met Arg Arg Gly Gly Asn			
180	185	190	
Ala Arg Ala Val Ala Ala Thr Asn Met Asn Gln Glu Ser Ser Arg Ser			
195	200	205	
His Ser Ile Phe Val Ile Thr Ile Thr Gln Lys Asn Val Glu Thr Gly			
210	215	220	
Ser Ala Lys Ser Gly Gln Leu Phe Leu Val Asp Leu Ala Gly Ser Glu			
225	230	235	240
Lys Val Gly Lys Thr Gly Ala Ser Gly Gln Thr Leu Glu Ala Lys			
245	250	255	
Lys Ile Asn Lys Ser Leu Ser Ala Leu Gly Met Val Ile Asn Ala Leu			
260	265	270	
Thr Asp Gly Lys Ser Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr			
275	280	285	
Arg Ile Leu Gln Glu Ser Leu Gly Gly Asn Ser Arg Thr Thr Leu Ile			
290	295	300	
Ile Asn Cys Ser Pro Ser Ser Tyr Asn Asp Ala Glu Thr Leu Ser Thr			

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305	310	315	320
Leu Arg Phe Gly Met Arg Ala Lys Ser Ile Lys Asn Lys Ala Lys Val			
325	330	335	
Asn Ala Glu Leu Ser Pro Ala Glu Leu Lys Gln Met Leu Ala Lys Ala			
340	345	350	
Lys Thr Gln Ile Thr Ser Phe Glu Asn Tyr Ile Val Asn Leu Glu Ser			
355	360	365	
Glu Val Gln Val Trp Arg Gly Gly Glu Thr Val Pro Lys Glu Lys Trp			
370	375	380	
Val Pro Pro Leu Glu Leu Ala Ile Thr Pro Ser Lys Ser Ala Ser Thr			
385	390	395	400
Thr Ala Arg Pro Ser Thr Pro Ser Arg Leu Leu Pro Glu Ser Arg Ala			
405	410	415	
Glu Thr Pro Ala Ile Ser Asp Arg Ala Gly Thr Pro Ser Leu Pro Leu			
420	425	430	
Asp Lys Asp Glu Arg Glu Glu Phe Leu Arg Arg Glu Asn Glu Leu Gln			
435	440	445	
Asp Gln Ile Ala Glu Lys Glu Ser Ile Ala Ala Ala Glu Arg Gln			
450	455	460	
Leu Arg Glu Thr Lys Glu Glu Leu Ile Ala Leu Lys Asp His Asp Ser			
465	470	475	480
Lys Leu Gly Lys Glu Asn Glu Arg Leu Ile Ser Glu Ser Asn Glu Phe			
485	490	495	
Lys Met Gln Leu Glu Arg Leu Ala Phe Glu Asn Lys Glu Ala Gln Ile			
500	505	510	
Thr Ile Asp Gly Leu Lys Asp Ala Asn Ser Glu Leu Thr Ala Glu Leu			
515	520	525	
Asp Glu Val Lys Gln Gln Met Leu Asp Met Lys Met Ser Ala Lys Glu			
530	535	540	
Thr Ser Ala Val Leu Asp Glu Lys Glu Lys Lys Ala Glu Lys Met			
545	550	555	560
Ala Lys Met Met Ala Gly Phe Asp Leu Ser Gly Asp Val Phe Ser Asp			
565	570	575	
Asn Glu Arg Ala Val Ala Asp Ala Ile Ala Gln Leu Asp Ala Leu Phe			
580	585	590	
Glu Ile Ser Ser Ala Gly Asp Ala Ile Pro Pro Glu Asp Ile Lys Ala			
595	600	605	
Leu Arg Glu Lys Leu Val Glu Thr Gln Gly Phe Val Arg Gln Ala Glu			
610	615	620	
Leu Ser Ser Phe Ser Ala Ala Ser Ser Asp Ala Glu Ala Arg Lys Arg			
625	630	635	640
Ala Glu Leu Glu Ala Arg Leu Glu Ala Leu Gln Gln Glu His Glu Glu			
645	650	655	
Leu Leu Ser Arg Asn Leu Thr Glu Ala Asp Lys Glu Glu Val Lys Ala			
660	665	670	
Leu Leu Ala Lys Ser Leu Ser Asp Lys Ser Ala Val Gln Val Glu Leu			
675	680	685	
Val Glu Gln Leu Lys Ala Asp Ile Ala Leu Lys Asn Ser Glu Thr Glu			
690	695	700	
His Leu Lys Ala Leu Val Asp Asp Leu Gln Arg Arg Val Lys Ala Gly			
705	710	715	720
Gly Ala Gly Val Ala Met Ala Asn Gly Lys Thr Val Gln Gln Gln Leu			
725	730	735	

## 8471-010 b.txt

Ala Glu Phe Asp Val Met Lys Lys Ser Leu Met Arg Asp Leu Gln Asn  
 740 745 750  
 Arg Cys Glu Arg Val Val Glu Leu Glu Ile Ser Leu Asp Glu Thr Arg  
 755 760 765  
 Glu Gln Tyr Asn Asn Val Leu Arg Ser Ser Asn Asn Arg Ala Gln Gln  
 770 775 780  
 Lys Lys Met Ala Phe Leu Glu Arg Asn Leu Glu Gln Leu Thr Gln Val  
 785 790 795 800  
 Gln Arg Gln Leu Val Glu Gln Asn Ser Ala Leu Lys Lys Glu Val Ala  
 805 810 815  
 Ile Ala Glu Arg Lys Leu Met Ala Arg Asn Glu Arg Ile Gln Ser Leu  
 820 825 830  
 Glu Ser Leu Leu Gln Glu Ser Gln Glu Lys Met Ala Gln Ala Asn His  
 835 840 845  
 Lys Phe Glu Val Gln Leu Ala Ala Val Lys Asp Arg Leu Glu Ala Ala  
 850 855 860  
 Lys Ala Gly Ser Thr Arg Gly Leu Gly Thr Asp Ala Gly Leu Gly Gly  
 865 870 875 880  
 Phe Ser Ile Gly Ser Arg Ile Ala Lys Pro Leu Arg Gly Gly Asp  
 885 890 895  
 Ala Val Ala Gly Ala Thr Ala Thr Asn Pro Thr Ile Ala Thr Leu Gln  
 900 905 910  
 Gln Asn Pro Pro Glu Asn Lys Arg Ser Ser Trp Phe Phe Gln Lys Ser  
 915 920 925

<210> 24  
 <211> 1031  
 <212> PRT  
 <213> Strongylocentrotus purpuratus

<400> 24

Met	Ala	Asp	Pro	Ala	Glu	Cys	Asn	Ile	Lys	Val	Val	Cys	Arg	Val	Arg
1															15
Pro	Met	Asn	Ala	Thr	Glu	Gln	Asn	Thr	Ser	His	Ile	Cys	Thr	Lys	Phe
	20														30
Ile	Ser	Glu	Glu	Gln	Val	Gln	Ile	Gly	Gly	Lys	Leu	Asn	Met	Phe	Asp
	35														45
Arg	Ile	Phe	Lys	Pro	Asn	Thr	Thr	Gln	Glu	Val	Tyr	Asn	Lys	Ala	
	50														50
Ala	Arg	Gln	Ile	Val	Lys	Asp	Val	Leu	Asp	Gly	Tyr	Asn	Gly	Thr	Ile
	65														80
Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	Phe	Thr	Met	Glu	Gly
	85														95
Val	Met	Gly	Asn	Pro	Gln	Tyr	Met	Gly	Ile	Ile	Pro	Arg	Ile	Val	Gln
	100														110
Asp	Ile	Phe	Asn	His	Ile	Tyr	Gln	Met	Asp	Glu	Ser	Leu	Glu	Phe	His
	115														125
Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Met	Asp	Arg	Ile	Arg	Asp	Leu
	130														140
Leu	Asp	Val	Ser	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys	Asn	Arg
	145														160
Val	Pro	Phe	Val	Lys	Gly	Ala	Thr	Glu	Arg	Phe	Ala	Ser	Ser	Pro	Glu
	165														175

## 8471-010 b.txt

Glu Val Met Asp Val Ile Glu Glu Gly Lys Ser Asn Arg His Ile Ala  
   180                   185                   190  
 Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile Phe Leu  
   195                   200                   205  
 Ile Gln Val Lys Gln Glu Asn Met Glu Thr Lys Lys Lys Leu Ser Gly  
   210                   215                   220  
 Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser Lys Thr  
   225                   230                   235                   240  
 Gly Ala Glu Gly Thr Val Leu Asp Glu Ala Lys Asn Ile Asn Lys Ser  
   245                   250                   255  
 Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Asp Gly Lys Lys  
   260                   265                   270  
 Ser His Ile Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu Gln Glu  
   275                   280                   285  
 Ser Leu Gly Gly Asn Ala Arg Thr Thr Ile Val Ile Cys Cys Ser Pro  
   290                   295                   300  
 Ser Ser Phe Asn Glu Ser Glu Ser Lys Ser Thr Leu Met Phe Gly Gln  
   305                   310                   315                   320  
 Arg Ala Lys Thr Ile Lys Asn Thr Val Thr Val Asn Met Glu Leu Thr  
   325                   330                   335  
 Ala Glu Glu Trp Arg Asn Arg Tyr Glu Lys Glu Lys Glu Lys Asn Gly  
   340                   345                   350  
 Arg Leu Lys Ala Gln Leu Leu Ile Leu Glu Asn Glu Leu Gln Arg Trp  
   355                   360                   365  
 Arg Ala Gly Glu Ser Val Pro Val Lys Glu Gln Gly Asn Lys Asn Asp  
   370                   375                   380  
 Glu Ile Leu Lys Glu Met Met Lys Pro Lys Gln Met Thr Val His Val  
   385                   390                   395                   400  
 Ser Glu Glu Glu Lys Asn Lys Trp Glu Glu Glu Lys Val Lys Leu Tyr  
   405                   410                   415  
 Glu Gln Leu Asp Glu Lys Asp Ser Glu Ile Asp Asn Gln Ser Arg Leu  
   420                   425                   430  
 Thr Glu Lys Leu Lys Gln Gln Met Leu Glu Gln Glu Leu Leu Ser  
   435                   440                   445  
 Ser Met Gln Arg Asp Tyr Glu Leu Leu Gln Ser Gln Met Gly Arg Leu  
   450                   455                   460  
 Glu Ala Glu Asn Ala Ala Lys Glu Glu Ala Lys Glu Val Leu Gln  
   465                   470                   475                   480  
 Ala Leu Glu Glu Met Ala Val Asn Tyr Asp Glu Lys Ser Lys Glu Val  
   485                   490                   495  
 Glu Asp Lys Asn Arg Met Asn Glu Thr Leu Ser Glu Glu Val Asn Glu  
   500                   505                   510  
 Lys Met Thr Ala Leu His Thr Thr Ser Thr Glu Leu Gln Lys Leu Gln  
   515                   520                   525  
 Glu Leu Glu Gln His Gln Arg Arg Arg Ile Thr Glu Met Met Ala Ser  
   530                   535                   540  
 Leu Leu Lys Asp Leu Gly Glu Ile Gly Thr Ala Leu Gly Gly Asn Ala  
   545                   550                   555                   560  
 Ala Asp Met Lys Pro Asn Val Glu Asn Ile Glu Lys Val Asp Glu Glu  
   565                   570                   575  
 Phe Thr Met Ala Arg Leu Phe Val Ser Lys Met Lys Thr Glu Val Lys  
   580                   585                   590  
 Thr Met Ser Gln Arg Cys Lys Ile Leu Glu Ala Ser Asn Ala Glu Asn

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595	600	605
Glu Thr Lys Ile Arg Thr Ser	Glu Asp Glu Leu Asp	Ser Cys Arg Met
610	615	620
Thr Ile Gln Gln His Glu Ala Lys Met Lys	Ser Leu Ser Glu Asn Ile	
625	630	635
Arg Glu Thr Glu Gly Lys Lys Arg His	Leu Glu Asp Ser Leu Asp	Met
645	650	655
Leu Asn Glu Glu Ile Val Lys Leu Arg Ala Ala	Glu Glu Ile Arg Leu	
660	665	670
Thr Asp Gln Glu Asp Lys Lys Arg Glu Glu Asp	Lys Met Gln Ser	
675	680	685
Ala Thr Glu Met Gln Ala Ser Met Ser Glu Gln	Met Glu Ser His Arg	
690	695	700
Asp Ala His Gln Lys Gln Leu Ala Asn Leu Arg	Thr Glu Ile Asn Glu	
705	710	715
Lys Glu His Gln Met Glu Glu Leu Lys Asp	Val Asn Gln Arg Met	Thr
725	730	735
Leu Gln His Glu Lys Leu Gln Leu Asp Tyr Glu Lys	Leu Lys Ile Glu	
740	745	750
Glu Ala Glu Lys Ala Ala Lys Leu Arg Glu Leu Ser	Gln Gln Phe Asp	
755	760	765
Arg Arg Glu Gln Ala Lys Gln Asp Leu Lys Gly	Leu Glu Glu Thr Val	
770	775	780
Ala Lys Glu Leu Gln Thr Leu His Asn Leu Arg	Lys Leu Phe Val Ser	
785	790	795
Asp Leu Gln Asn Arg Val Lys Lys Ala Leu Glu	Gly Gly Asp Arg Asp	
805	810	815
Asp Asp Ser Gly Ser Gln Ala Gln Lys Gln Lys	Ile Ser Phe Leu	
820	825	830
Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His	Lys Gln Leu Val Arg	
835	840	845
Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys	Leu Glu Arg Arg Leu	
850	855	860
Arg Ala Thr Ser Glu Arg Val Lys Ala Leu Glu	Met Ser Leu Lys Glu	
865	870	875
Thr Lys Glu Gly Ala Met Arg Asp Arg	Lys Arg Tyr Gln Gln Glu Val	
885	890	895
Asp Arg Ile Arg Glu Ala Val Arg Gln Arg Asn	Phe Ala Lys Arg Gly	
900	905	910
Ser Ser Ala Gln Ile Ala Lys Ala Ile Arg Ala	Gly His Pro Pro Pro	
915	920	925
Ser Pro Gly Gly Ser Thr Gly Ile Arg Gly	Gly Gly Tyr Ser Gly Ile	
930	935	940
Arg Gly Gly Gly Ser Pro Val Ile Arg Pro Pro	Ser His Gly Ser Pro	
945	950	955
Glu Pro Ile Ser His Asn Asn Ser Phe Glu	Lys Ser Leu Asn Pro Asn	
965	970	975
Asp Ala Glu Asn Met Glu Lys Lys Ala Asn Lys	Arg Leu Pro Lys Leu	
980	985	990
Pro Pro Gly Gly Asn Lys Leu Thr Glu Ser Asp	Ile Ala Ala Met Lys	
995	1000	1005
Ala Arg Ser Lys Ala Arg Asn Asn Thr Pro Gly	Lys Ala Pro Leu Thr	
1010	1015	1020

Thr Ser Gly Glu Gln Gly Ser  
1025 1030

<210> 25  
<211> 935  
<212> PRT  
<213> Synccephalastrum racemosum

<400> 25  
Met Ser Gly Asn Asn Ile Lys Val Val Cys Arg Phe Arg Pro Gln Asn  
1 5 10 15  
Ser Leu Glu Ile Arg Glu Gly Gly Thr Pro Ile Ile Asp Ile Asp Pro  
20 25 30  
Glu Gly Thr Gln Leu Glu Leu Lys Gly Lys Glu Phe Lys Gly Asn Phe  
35 40 45  
Asn Phe Asp Lys Val Phe Gly Met Asn Thr Ala Gln Lys Asp Val Phe  
50 55 60  
Asp Tyr Ser Ile Lys Thr Ile Val Asp Asp Val Thr Ala Gly Tyr Asn  
65 70 75 80  
Gly Thr Val Phe Ala Tyr Gly Gln Thr Gly Ser Gly Lys Thr Phe Thr  
85 90 95  
Met Met Gly Ala Asp Ile Asp Asp Glu Lys Thr Lys Gly Ile Ile Pro  
100 105 110  
Arg Ile Val Glu Gln Ile Phe Asp Ser Ile Met Ala Ser Pro Ser Asn  
115 120 125  
Leu Glu Phe Thr Val Lys Val Ser Tyr Met Glu Ile Tyr Met Glu Lys  
130 135 140  
Val Arg Asp Leu Leu Asn Pro Ser Ser Glu Asn Leu Pro Ile His Glu  
145 150 155 160  
Asp Lys Thr Lys Gly Val Tyr Val Lys Gly Leu Leu Glu Val Tyr Val  
165 170 175  
Gly Ser Thr Asp Glu Val Tyr Glu Val Met Arg Arg Gly Ser Asn Asn  
180 185 190  
Arg Val Val Ala Tyr Thr Asn Met Asn Ala Glu Ser Ser Arg Ser His  
195 200 205  
Ser Ile Val Met Phe Thr Ile Thr Gln Lys Asn Val Asp Thr Gly Ala  
210 215 220  
Ala Lys Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys  
225 230 235 240  
Val Gly Lys Thr Gly Ala Ser Gly Gln Thr Leu Glu Glu Ala Lys Lys  
245 250 255  
Ile Asn Lys Ser Leu Thr Ala Leu Gly Met Val Ile Asn Ala Leu Thr  
260 265 270  
Asp Gly Lys Ser Ser His Val Pro Tyr Arg Asp Ser Lys Leu Thr Arg  
275 280 285  
Ile Leu Gln Glu Ser Leu Gly Gly Asn Ser Arg Thr Thr Leu Ile Ile  
290 295 300  
Asn Cys Ser Pro Ser Ser Tyr Asn Glu Ala Glu Thr Leu Ser Thr Leu  
305 310 315 320  
Arg Phe Gly Ala Arg Ala Lys Ser Ile Lys Asn Lys Ala Lys Val Asn  
325 330 335  
Ala Asp Leu Ser Pro Ala Glu Leu Lys Ala Leu Leu Lys Lys Val Lys  
340 345 350

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Ser Glu Ala Val Thr Tyr Gln Thr Tyr Ile Ala Ala Leu Glu Gly Glu  
     355                  360                  365  
 Val Asn Val Trp Arg Thr Gly Gly Thr Val Pro Glu Gly Lys Trp Val  
     370                  375                  380  
 Thr Met Asp Lys Val Ser Lys Gly Asp Phe Ala Gly Leu Pro Pro Ala  
     385                  390                  395                  400  
 Pro Gly Phe Lys Ser Pro Val Ser Asp Glu Gly Ser Arg Pro Ala Thr  
     405                  410                  415  
 Pro Val Pro Thr Leu Glu Lys Asp Glu Arg Glu Glu Phe Ile Lys Arg  
     420                  425                  430  
 Glu Asn Glu Leu Met Asp Gln Ile Ser Glu Lys Glu Thr Glu Leu Thr  
     435                  440                  445  
 Asn Arg Glu Lys Leu Leu Glu Ser Leu Arg Glu Glu Met Gly Tyr Tyr  
     450                  455                  460  
 Lys Glu Gln Glu Gln Ser Val Thr Lys Glu Asn Gln Gln Met Thr Ser  
     465                  470                  475                  480  
 Glu Leu Ser Glu Leu Arg Leu Gln Leu Gln Lys Val Ser Tyr Glu Ser  
     485                  490                  495  
 Lys Glu Asn Ala Ile Thr Val Asp Ser Leu Lys Glu Ala Asn Gln Asp  
     500                  505                  510  
 Leu Met Ala Glu Leu Glu Leu Lys Lys Asn Leu Ser Glu Met Arg  
     515                  520                  525  
 Gln Ala His Lys Asp Ala Thr Asp Ser Asp Lys Glu Lys Arg Lys Ala  
     530                  535                  540  
 Glu Lys Met Ala Gln Met Met Ser Gly Phe Asp Pro Ser Gly Ile Leu  
     545                  550                  555                  560  
 Asn Asp Lys Glu Arg Gln Ile Arg Asn Ala Leu Ser Lys Leu Asp Gly  
     565                  570                  575  
 Glu Gln Gln Thr Leu Thr Val Glu Asp Leu Val Ser Leu Arg Arg  
     580                  585                  590  
 Glu Leu Ala Glu Ser Lys Met Leu Val Glu Gln His Thr Lys Thr Ile  
     595                  600                  605  
 Ser Asp Leu Ser Ala Asp Lys Asp Ala Met Glu Ala Lys Lys Ile Glu  
     610                  615                  620  
 Leu Glu Gly Arg Leu Gly Ala Leu Glu Lys Glu Tyr Glu Glu Leu Leu  
     625                  630                  635                  640  
 Asp Lys Thr Ile Ala Glu Glu Ala Asn Met Gln Asn Ala Asp Val  
     645                  650                  655  
 Asp Asn Leu Ser Ala Leu Lys Thr Lys Leu Glu Ala Gln Tyr Ala Glu  
     660                  665                  670  
 Lys Lys Glu Val Gln Gln Lys Glu Ile Asp Asp Leu Lys Arg Glu Leu  
     675                  680                  685  
 Asp Arg Lys Gln Ser Gly His Glu Lys Leu Ser Ala Ala Met Thr Asp  
     690                  695                  700  
 Leu Arg Ala Ala Asn Asp Gln Leu Gln Ala Ala Leu Ser Glu Gln Pro  
     705                  710                  715                  720  
 Phe Gln Ala Pro Gln Asp Asn Ser Asp Met Thr Glu Lys Glu Lys Asp  
     725                  730                  735  
 Ile Glu Arg Thr Arg Lys Ser Met Ala Gln Gln Leu Ala Asp Phe Glu  
     740                  745                  750  
 Val Met Lys Lys Ala Leu Met Arg Asp Leu Gln Asn Arg Cys Glu Lys  
     755                  760                  765  
 Val Val Glu Leu Glu Met Ser Leu Asp Glu Thr Arg Glu Gln Tyr Asn

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770	775	780													
Asn	Val	Leu	Arg	Ala	Ser	Asn	Asn	Lys	Ala	Gln	Gln	Lys	Lys	Met	Ala
785						790				795					800
Phe	Leu	Glu	Arg	Asn	Leu	Glu	Gln	Leu	Thr	Asn	Val	Gln	Lys	Gln	Leu
						805				810					815
Val	Glu	Gln	Asn	Ala	Ser	Leu	Lys	Lys	Glu	Val	Ala	Leu	Ala	Glu	Arg
						820				825					830
Lys	Leu	Ile	Ala	Arg	Asn	Glu	Arg	Ile	Gln	Ser	Leu	Glu	Thr	Leu	Leu
						835				840					845
His	Asn	Ala	Gln	Asp	Lys	Leu	Leu	Asn	Gln	Asn	Lys	Lys	Phe	Glu	Gln
						850				855					860
Gln	Leu	Ala	Thr	Val	Arg	Glu	Arg	Leu	Glu	Gln	Ala	Arg	Ser	Gln	Lys
						865				870					880
Ser	Gln	Asn	Ser	Leu	Ala	Ala	Leu	Asn	Phe	Ser	Arg	Ile	Ala	Lys	Pro
						885				890					895
Leu	Arg	Gly	Asn	Gly	Ala	Ala	Ile	Asp	Asn	Gly	Ser	Asp	Asp	Gly	Ser
						900				905					910
Leu	Pro	Thr	Ser	Pro	Thr	Asp	Lys	Arg	Asp	Lys	Arg	Ser	Ser	Trp	Met
						915				920					925
Pro	Gly	Phe	Met	Asn	Ser	Arg									
						930				935					

&lt;210&gt; 26

&lt;211&gt; 1032

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 26

Met	Ala	Glu	Thr	Asn	Asn	Glu	Cys	Ser	Ile	Lys	Val	Leu	Cys	Arg	Phe
1						5				10					15
Arg	Pro	Leu	Asn	Gln	Ala	Glu	Ile	Leu	Arg	Gly	Asp	Lys	Phe	Ile	Pro
							20				25				30
Ile	Phe	Gln	Gly	Asp	Asp	Ser	Val	Val	Ile	Gly	Gly	Lys	Pro	Tyr	Val
							35				40				45
Phe	Asp	Arg	Val	Phe	Pro	Pro	Asn	Thr	Thr	Gln	Glu	Gln	Val	Tyr	His
							50				55				60
Ala	Cys	Ala	Met	Gln	Ile	Val	Lys	Asp	Val	Leu	Ala	Gly	Tyr	Asn	Gly
							65				70				80
Thr	Ile	Phe	Ala	Tyr	Gly	Gln	Thr	Ser	Ser	Gly	Lys	Thr	His	Thr	Met
							85				90				95
Glu	Gly	Lys	Leu	His	Asp	Pro	Gln	Leu	Met	Gly	Ile	Ile	Pro	Arg	Ile
							100				105				110
Ala	Arg	Asp	Ile	Phe	Asn	His	Ile	Tyr	Ser	Met	Asp	Glu	Asn	Leu	Glu
							115				120				125
Phe	His	Ile	Lys	Val	Ser	Tyr	Phe	Glu	Ile	Tyr	Leu	Asp	Lys	Ile	Arg
							130				135				140
Asp	Leu	Leu	Asp	Val	Thr	Lys	Thr	Asn	Leu	Ser	Val	His	Glu	Asp	Lys
							145				150				160
Asn	Arg	Val	Pro	Phe	Val	Lys	Gly	Cys	Thr	Glu	Arg	Phe	Val	Ser	Ser
							165				170				175
Pro	Glu	Glu	Ile	Leu	Asp	Val	Ile	Asp	Glu	Gly	Lys	Ser	Asn	Arg	His
							180				185				190
Val	Ala	Val	Thr	Asn	Met	Asn	Glu	His	Ser	Ser	Arg	Ser	His	Ser	Ile

## 8471-010 b.txt

195	200	205
Phe Leu Ile Asn Ile Lys Gln Glu Asn Met Glu Thr Glu Gln Lys Leu		
210	215	220
Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser		
225	230	235
Lys Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn		
245	250	255
Lys Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly		
260	265	270
Thr Lys Ser Tyr Val Pro Tyr Arg Asp Ser Lys Met Thr Arg Ile Leu		
275	280	285
Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Met Phe Ile Cys Cys		
290	295	300
Ser Pro Ser Ser Tyr Asn Asp Ala Glu Thr Lys Ser Thr Leu Met Phe		
305	310	315
Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Ala Ser Val Asn Leu Glu		
325	330	335
Leu Thr Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys		
340	345	350
Thr Lys Ala Gln Lys Glu Thr Ile Ala Lys Leu Glu Ala Glu Leu Ser		
355	360	365
Arg Trp Arg Asn Gly Glu Asn Val Pro Glu Thr Glu Arg Leu Ala Gly		
370	375	380
Glu Glu Ala Ala Leu Gly Ala Glu Leu Cys Glu Glu Thr Pro Val Asn		
385	390	395
Asp Asn Ser Ser Ile Val Val Arg Ile Ala Pro Glu Glu Arg Gln Lys		
405	410	415
Tyr Glu Glu Glu Ile Arg Arg Leu Tyr Lys Gln Leu Asp Asp Lys Asp		
420	425	430
Asp Glu Ile Asn Gln Gln Ser Gln Leu Ile Glu Lys Leu Lys Gln Gln		
435	440	445
Met Leu Asp Gln Glu Glu Leu Leu Val Ser Thr Arg Gly Asp Asn Glu		
450	455	460
Lys Val Gln Arg Glu Leu Ser His Leu Gln Ser Glu Asn Asp Ala Ala		
465	470	475
Lys Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val		
485	490	495
Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Glu Lys Ser Gln Gln Asn		
500	505	510
Gln Leu Leu Val Asp Glu Leu Ser Gln Lys Val Ala Thr Met Leu Ser		
515	520	525
Leu Glu Ser Glu Leu Gln Arg Leu Gln Glu Val Ser Gly His Gln Arg		
530	535	540
Lys Arg Ile Ala Glu Val Leu Asn Gly Leu Met Lys Asp Leu Ser Glu		
545	550	555
Phe Ser Val Ile Val Gly Asn Gly Glu Ile Lys Leu Pro Val Glu Ile		
565	570	575
Ser Gly Ala Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser		
580	585	590
Lys Ile Lys Ser Glu Val Lys Ser Val Val Lys Arg Cys Arg Gln Leu		
595	600	605
Glu Asn Leu Gln Val Glu Cys His Arg Lys Met Glu Val Thr Gly Arg		
610	615	620

## 8471-010 b.txt

Glu Leu Ser Ser Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile  
 625 630 635 640  
 Arg Ser Leu Thr Glu Tyr Met Gln Ser Val Glu Leu Lys Lys Arg His  
 645 650 655  
 Leu Glu Glu Ser Tyr Asp Ser Leu Ser Asp Glu Leu Ala Lys Leu Gln  
 660 665 670  
 Ala Gln Glu Thr Val His Glu Val Ala Leu Lys Asp Lys Glu Pro Asp  
 675 680 685  
 Thr Gln Asp Ala Asp Glu Val Lys Lys Ala Leu Glu Leu Gln Met Glu  
 690 695 700  
 Ser His Arg Glu Ala His His Arg Gln Leu Ala Arg Leu Arg Asp Glu  
 705 710 715 720  
 Ile Asn Glu Lys Gln Lys Thr Ile Asp Glu Leu Lys Asp Leu Asn Gln  
 725 730 735  
 Lys Leu Gln Leu Glu Leu Glu Lys Leu Gln Ala Asp Tyr Glu Lys Leu  
 740 745 750  
 Lys Ser Glu Glu His Glu Lys Ser Thr Lys Leu Gln Glu Leu Thr Phe  
 755 760 765  
 Leu Tyr Glu Arg His Glu Gln Ser Lys Gln Asp Leu Lys Gly Leu Glu  
 770 775 780  
 Glu Thr Val Ala Arg Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu  
 785 790 795 800  
 Phe Val Gln Asp Val Thr Thr Arg Val Lys Lys Ser Ala Glu Met Glu  
 805 810 815  
 Pro Glu Asp Ser Gly Gly Ile His Ser Gln Lys Gln Lys Ile Ser Phe  
 820 825 830  
 Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val  
 835 840 845  
 Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Lys Arg  
 850 855 860  
 Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Gly Ala Leu Lys  
 865 870 875 880  
 Glu Ala Lys Glu Gly Ala Met Lys Asp Lys Arg Arg Tyr Gln Gln Glu  
 885 890 895  
 Val Asp Arg Ile Lys Glu Ala Val Arg Tyr Lys Ser Ser Gly Lys Arg  
 900 905 910  
 Ala His Ser Ala Gln Ile Ala Lys Pro Val Arg Pro Gly His Tyr Pro  
 915 920 925  
 Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile  
 930 935 940  
 Ser Tyr Thr Asn Ser Leu Phe Gln Asn Tyr Gln Asn Leu Tyr Leu Gln  
 945 950 955 960  
 Ala Thr Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Asn Ser Cys Thr  
 965 970 975  
 Ser Ser Gly Ala Thr Ser Ser Gly Gly Pro Leu Ala Ser Tyr Gln Lys  
 980 985 990  
 Ala Asn Met Asp Asn Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser  
 995 1000 1005  
 Asp Leu Pro Cys Gly Tyr Glu Ala Glu Asp Gln Ala Lys Leu Phe Pro  
 1010 1015 1020  
 Leu His Gln Glu Thr Ala Ala Ser  
 1025 1030

&lt;210&gt; 27

&lt;211&gt; 1027

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 27

Met Ala Glu Thr Asn Asn Glu Cys Ser Ile Lys Val Leu Cys Arg Phe  
 1 5 10 15  
 Arg Pro Leu Asn Gln Ala Glu Ile Leu Arg Gly Asp Lys Phe Ile Pro  
 20 25 30  
 Ile Phe Gln Gly Asp Asp Ser Val Ile Ile Gly Gly Lys Pro Tyr Val  
 35 40 45  
 Phe Asp Arg Val Phe Pro Pro Asn Thr Thr Gln Glu Gln Val Tyr His  
 50 55 60  
 Ala Cys Ala Met Gln Ile Val Lys Asp Val Leu Ala Gly Tyr Asn Gly  
 65 70 75 80  
 Thr Ile Phe Ala Tyr Gly Gln Thr Ser Ser Gly Lys Thr His Thr Met  
 85 90 95  
 Glu Gly Lys Leu His Asp Pro Gln Leu Met Gly Ile Ile Pro Arg Ile  
 100 105 110  
 Ala Arg Asp Ile Phe Asn His Ile Tyr Ser Met Asp Glu Asn Leu Glu  
 115 120 125  
 Phe His Ile Lys Val Ser Tyr Phe Glu Ile Tyr Leu Asp Lys Ile Arg  
 130 135 140  
 Asp Leu Leu Asp Val Thr Lys Thr Asn Leu Ser Val His Glu Asp Lys  
 145 150 155 160  
 Asn Arg Val Pro Phe Val Lys Gly Cys Thr Glu Arg Phe Val Ser Ser  
 165 170 175  
 Pro Glu Glu Ile Leu Asp Val Ile Asp Glu Gly Lys Ser Asn Arg His  
 180 185 190  
 Val Ala Val Thr Asn Met Asn Glu His Ser Ser Arg Ser His Ser Ile  
 195 200 205  
 Phe Leu Ile Asn Ile Lys Gln Glu Asn Val Glu Thr Glu Gln Lys Leu  
 210 215 220  
 Ser Gly Lys Leu Tyr Leu Val Asp Leu Ala Gly Ser Glu Lys Val Ser  
 225 230 235 240  
 Lys Thr Gly Ala Glu Gly Ala Val Leu Asp Glu Ala Lys Asn Ile Asn  
 245 250 255  
 Lys Ser Leu Ser Ala Leu Gly Asn Val Ile Ser Ala Leu Ala Glu Gly  
 260 265 270  
 Thr Lys Ser Tyr Val Pro Tyr Arg Asp Thr Lys Met Thr Arg Ile Leu  
 275 280 285  
 Gln Asp Ser Leu Gly Gly Asn Cys Arg Thr Thr Met Phe Ile Cys Cys  
 290 295 300  
 Ser Pro Ser Ser Tyr Asn Asp Ala Glu Thr Lys Ser Thr Leu Met Phe  
 305 310 315 320  
 Gly Gln Arg Ala Lys Thr Ile Lys Asn Thr Ala Ser Val Asn Leu Glu  
 325 330 335  
 Leu Thr Ala Glu Gln Trp Lys Lys Tyr Glu Lys Glu Lys Glu Lys  
 340 345 350  
 Thr Lys Ala Gln Lys Glu Thr Ile Ala Asn Val Glu Ala Glu Leu Ser  
 355 360 365  
 Arg Trp Arg Asn Gly Glu Asn Val Pro Glu Thr Glu Arg Leu Ala Gly

## 8471-010 b.txt

370	375	380
Glu Asp Ser Ala Leu Gly Ala Glu Leu Cys Glu Glu Thr Pro Val Asn		
385	390	395
Asp Asn Ser Ser Ile Val Val Arg Ile Ala Pro Glu Glu Arg Gln Lys		400
405	410	415
Tyr Glu Glu Glu Ile Arg Arg Leu Tyr Lys Gln Leu Asp Asp Lys Asp		
420	425	430
Asp Glu Ile Asn Gln Gln Ser Gln Leu Ile Glu Lys Leu Lys Gln Gln		
435	440	445
Met Leu Asp Gln Glu Glu Leu Leu Val Ser Thr Arg Gly Asp Asn Glu		
450	455	460
Lys Val Gln Arg Glu Leu Ser His Leu Gln Ser Glu Asn Asp Ala Ala		
465	470	475
Lys Asp Glu Val Lys Glu Val Leu Gln Ala Leu Glu Glu Leu Ala Val		480
485	490	495
Asn Tyr Asp Gln Lys Ser Gln Glu Val Glu Glu Lys Ser Gln Gln Asn		
500	505	510
Gln Leu Leu Val Asp Glu Leu Ser Gln Lys Val Ala Thr Met Leu Ser		
515	520	525
Leu Glu Ser Glu Leu Gln Arg Leu Gln Glu Val Ser Gly His Gln Arg		
530	535	540
Lys Arg Ile Ala Glu Val Leu Asn Gly Leu Met Arg Asp Leu Ser Glu		
545	550	555
Phe Ser Val Ile Val Gly Asn Gly Glu Ile Lys Leu Pro Val Glu Ile		
565	570	575
Ser Gly Ala Ile Glu Glu Glu Phe Thr Val Ala Arg Leu Tyr Ile Ser		
580	585	590
Lys Ile Lys Ser Glu Val Lys Ser Val Val Lys Arg Cys Arg Gln Leu		
595	600	605
Glu Asn Leu Gln Val Glu Cys His Arg Lys Met Glu Val Thr Gly Arg		
610	615	620
Glu Leu Ser Ser Cys Gln Leu Leu Ile Ser Gln His Glu Ala Lys Ile		
625	630	635
Arg Ser Leu Thr Glu Tyr Met Gln Thr Val Glu Leu Lys Lys Arg His		
645	650	655
Leu Glu Glu Ser Tyr Asp Ser Leu Ser Asp Glu Leu Ala Arg Leu Gln		
660	665	670
Ala His Glu Thr Val His Glu Val Ala Leu Lys Asp Lys Glu Pro Asp		
675	680	685
Thr Gln Asp Ala Glu Glu Val Lys Lys Ala Leu Glu Leu Gln Met Glu		
690	695	700
Asn His Arg Glu Ala His His Arg Gln Leu Ala Arg Leu Arg Asp Glu		
705	710	715
Ile Asn Glu Lys Gln Lys Thr Ile Asp Glu Leu Lys Asp Leu Asn Gln		720
725	730	735
Lys Leu Gln Leu Glu Leu Glu Lys Leu Gln Ala Asp Tyr Glu Arg Leu		
740	745	750
Lys Asn Glu Glu Asn Glu Lys Ser Ala Lys Leu Gln Glu Leu Thr Phe		
755	760	765
Leu Tyr Glu Arg His Glu Gln Ser Lys Gln Asp Leu Lys Gly Leu Glu		
770	775	780
Glu Thr Val Ala Arg Glu Leu Gln Thr Leu His Asn Leu Arg Lys Leu		
785	790	800

## 8471-010 b.txt

Phe Val Gln Asp Val Thr Thr Arg Val Lys Lys Ser Ala Glu Met Glu  
       805                  810                  815  
 Pro Glu Asp Ser Gly Gly Ile His Ser Gln Lys Gln Lys Ile Ser Phe  
       820                  825                  830  
 Leu Glu Asn Asn Leu Glu Gln Leu Thr Lys Val His Lys Gln Leu Val  
       835                  840                  845  
 Arg Asp Asn Ala Asp Leu Arg Cys Glu Leu Pro Lys Leu Glu Lys Arg  
       850                  855                  860  
 Leu Arg Ala Thr Ala Glu Arg Val Lys Ala Leu Glu Gly Ala Leu Lys  
       865                  870                  875                  880  
 Glu Ala Lys Glu Gly Ala Met Lys Asp Lys Arg Arg Tyr Gln Gln Glu  
       885                  890                  895  
 Val Asp Arg Ile Lys Glu Ala Val Arg Tyr Lys Ser Ser Gly Lys Arg  
       900                  905                  910  
 Gly His Ser Ala Gln Ile Ala Lys Pro Val Arg Pro Gly His Tyr Pro  
       915                  920                  925  
 Ala Ser Ser Pro Thr Asn Pro Tyr Gly Thr Arg Ser Pro Glu Cys Ile  
       930                  935                  940  
 Ser Tyr Thr Asn Asn Leu Phe Gln Asn Tyr Gln Asn Leu His Leu Gln  
       945                  950                  955                  960  
 Ala Ala Pro Ser Ser Thr Ser Asp Met Tyr Phe Ala Ser Ser Gly Arg  
       965                  970                  975  
 Thr Ser Val Ala Pro Leu Ala Ser Tyr Gln Lys Ala Asn Met Asp Asn  
       980                  985                  990  
 Gly Asn Ala Thr Asp Ile Asn Asp Asn Arg Ser Asp Leu Pro Cys Gly  
       995                  1000                1005  
 Tyr Glu Ala Glu Asp Gln Ala Lys Leu Phe Pro Leu His Gln Glu Thr  
       1010                1015                1020  
 Ala Ala Ser  
       1025

<210> 28  
 <211> 1111  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 28  
 Met Ala Arg Ser Ser Leu Pro Asn Arg Arg Thr Ala Gln Phe Glu Ala  
       1                  5                  10                  15  
 Asn Lys Arg Arg Thr Ile Ala His Ala Pro Ser Pro Ser Leu Ser Asn  
       20                  25                  30  
 Gly Met His Thr Leu Thr Pro Pro Thr Cys Asn Asn Gly Ala Ala Thr  
       35                  40                  45  
 Ser Asp Ser Asn Ile His Val Tyr Val Arg Cys Arg Ser Arg Asn Lys  
       50                  55                  60  
 Arg Glu Ile Glu Glu Lys Ser Ser Val Val Ile Ser Thr Leu Gly Pro  
       65                  70                  75                  80  
 Gln Gly Lys Glu Ile Ile Leu Ser Asn Gly Ser His Gln Ser Tyr Ser  
       85                  90                  95  
 Ser Ser Lys Lys Thr Tyr Gln Phe Asp Gln Val Phe Gly Ala Glu Ser  
       100                105                110  
 Asp Gln Glu Thr Val Phe Asn Ala Thr Ala Lys Asn Tyr Ile Lys Glu  
       115                120                125

## 8471-010 b.txt

Met Leu His Gly Tyr Asn Cys Thr Ile Phe Ala Tyr Gly Gln Thr Gly  
 130 135 140  
 Thr Gly Lys Thr Tyr Thr Met Ser Gly Asp Ile Asn Ile Leu Gly Asp  
 145 150 155 160  
 Val Gln Ser Thr Asp Asn Leu Leu Gly Glu His Ala Gly Ile Ile  
 165 170 175  
 Pro Arg Val Leu Val Asp Leu Phe Lys Glu Leu Ser Ser Leu Asn Lys  
 180 185 190  
 Glu Tyr Ser Val Lys Ile Ser Phe Leu Glu Leu Tyr Asn Glu Asn Leu  
 195 200 205  
 Lys Asp Leu Leu Ser Asp Ser Glu Asp Asp Asp Pro Ala Val Asn Asp  
 210 215 220  
 Pro Lys Arg Gln Ile Arg Ile Phe Asp Asn Asn Asn Asn Asn Ser Ser  
 225 230 235 240  
 Ile Met Val Lys Gly Met Gln Glu Ile Phe Ile Asn Ser Ala His Glu  
 245 250 255  
 Gly Leu Asn Leu Leu Met Gln Gly Ser Leu Lys Arg Lys Val Ala Ala  
 260 265 270  
 Thr Lys Cys Asn Asp Leu Ser Ser Arg Ser His Thr Val Phe Thr Ile  
 275 280 285  
 Thr Thr Asn Ile Val Glu Gln Asp Ser Lys Asp His Gly Gln Asn Lys  
 290 295 300  
 Asn Phe Val Lys Ile Gly Lys Leu Asn Leu Val Asp Leu Ala Gly Ser  
 305 310 315 320  
 Glu Asn Ile Asn Arg Ser Gly Ala Glu Asn Lys Arg Ala Gln Glu Ala  
 325 330 335  
 Gly Leu Ile Asn Lys Ser Leu Leu Thr Leu Gly Arg Val Ile Asn Ala  
 340 345 350  
 Leu Val Asp His Ser Asn His Ile Pro Tyr Arg Glu Ser Lys Leu Thr  
 355 360 365  
 Arg Leu Leu Gln Asp Ser Leu Gly Gly Met Thr Lys Thr Cys Ile Ile  
 370 375 380  
 Ala Thr Ile Ser Pro Ala Lys Ile Ser Met Glu Glu Thr Ala Ser Thr  
 385 390 395 400  
 Leu Glu Tyr Ala Thr Arg Ala Lys Ser Ile Lys Asn Thr Pro Gln Val  
 405 410 415  
 Asn Gln Ser Leu Ser Lys Asp Thr Cys Leu Lys Asp Tyr Ile Gln Glu  
 420 425 430  
 Ile Glu Lys Leu Arg Asn Asp Leu Lys Asn Ser Arg Asn Lys Gln Gly  
 435 440 445  
 Ile Phe Ile Thr Gln Asp Gln Leu Asp Leu Tyr Glu Ser Asn Ser Ile  
 450 455 460  
 Leu Ile Asp Glu Gln Asn Leu Lys Ile His Asn Leu Arg Glu Gln Ile  
 465 470 475 480  
 Lys Lys Phe Lys Glu Asn Tyr Leu Asn Gln Leu Asp Ile Asn Asn Leu  
 485 490 495  
 Leu Gln Ser Glu Lys Glu Lys Leu Ile Ala Ile Ile Gln Asn Phe Asn  
 500 505 510  
 Val Asp Phe Ser Asn Phe Tyr Ser Glu Ile Gln Lys Ile His His Thr  
 515 520 525  
 Asn Leu Glu Leu Met Asn Glu Val Ile Gln Gln Arg Asp Phe Ser Leu  
 530 535 540  
 Glu Asn Ser Gln Lys Gln Tyr Asn Thr Asn Gln Asn Met Gln Leu Lys

## 8471-010 b.txt

545	550	555	560
Ile Ser Gln Gln Val Leu Gln Thr Leu Asn Thr	Leu Gln Gly Ser	Leu	
565	570	575	
Asn Asn Tyr Asn Ser Lys Cys Ser Glu Val Ile	Lys Gly Val Thr	Glu	
580	585	590	
Glu Leu Thr Arg Asn Val Asn Thr His Lys Ala	Lys His Asp Ser	Thr	
595	600	605	
Leu Lys Ser Leu Leu Asn Ile Thr Thr Asn Leu	Leu Met Asn Gln Met		
610	615	620	
Asn Glu Leu Val Arg Ser Ile Ser Thr Ser	Leu Glu Ile Phe Gln Ser		
625	630	635	640
Asp Ser Thr Ser His Tyr Arg Lys Asp	Leu Asn Glu Ile Tyr Gln Ser		
645	650	655	
His Gln Gln Phe Leu Lys Asn Leu Gln Asn Asp	Ile Lys Ser Cys	Leu	
660	665	670	
Asp Ser Ile Gly Ser Ser Ile Leu Thr Ser Ile Asn	Glu Ile Ser Gln		
675	680	685	
Asn Cys Thr Thr Asn Leu Asn Ser Met Asn Val	Leu Ile Glu Asn Gln		
690	695	700	
Gln Ser Gly Ser Ser Lys Leu Ile Lys Glu Gln	Asp Leu Glu Ile Lys		
705	710	715	720
Lys Leu Lys Asn Asp Leu Ile Asn Glu Arg Arg	Ile Ser Asn Gln Phe		
725	730	735	
Asn Gln Gln Leu Ala Glu Met Lys Arg Tyr Phe	Gln Asp His Val Ser		
740	745	750	
Arg Thr Arg Ser Glu Phe His Asp Glu Leu Asn	Lys Cys Ile Asp Asn		
755	760	765	
Leu Lys Asp Lys Gln Ser Lys Leu Asp Gln Asp	Ile Trp Gln Lys Thr		
770	775	780	
Ala Ser Ile Phe Asn Glu Thr Asp Ile Val Val	Asn Lys Ile His Ser		
785	790	795	800
Asp Ser Ile Ala Ser Leu Ala His Asn Ala Glu	Asn Thr Leu Lys Thr		
805	810	815	
Val Ser Gln Asn Asn Glu Ser Phe Thr Asn Asp	Leu Ile Ser Leu Ser		
820	825	830	
Arg Gly Met Asn Met Asp Ile Ser Ser Lys	Leu Arg Ser Leu Pro Ile		
835	840	845	
Asn Glu Phe Leu Asn Lys Ile Ser Gln Thr Ile	Cys Glu Thr Cys Gly		
850	855	860	
Asp Asp Asn Thr Ile Ala Ser Asn Pro Val	Leu Thr Ser Ile Lys Lys		
865	870	875	880
Phe Gln Asn Ile Ile Cys Ser Asp Ile Ala	Leu Thr Asn Glu Lys Ile		
885	890	895	
Met Ser Leu Ile Asp Glu Ile Gln Ser Gln	Ile Glu Thr Ile Ser Asn		
900	905	910	
Glu Asn Asn Ile Asn Leu Ile Ala Ile Asn Glu	Asn Phe Asn Ser Leu		
915	920	925	
Cys Asn Phe Ile Leu Thr Asp Tyr Asp Glu Asn	Ile Met Gln Ile Ser		
930	935	940	
Lys Thr Gln Asp Glu Val Leu Ser Glu His Cys	Glu Lys Leu Gln Ser		
945	950	955	960
Leu Lys Ile Leu Gly Met Asp Ile Phe Thr Ala	His Ser Ile Glu Lys		
965	970	975	

## 8471-010 b.txt

Pro Leu His Glu His Thr Arg Pro Glu Ala Ser Val Ile Lys Ala Leu  
     980               985               990  
 Pro Leu Leu Asp Tyr Pro Lys Gln Phe Gln Ile Tyr Arg Asp Ala Glu  
     995               1000               1005  
 Asn Lys Ser Lys Asp Asp Thr Ser Asn Ser Arg Thr Cys Ile Pro Asn  
   1010               1015               1020  
 Leu Ser Thr Asn Glu Asn Phe Pro Leu Ser Gln Phe Ser Pro Lys Thr  
   1025               1030               1035               1040  
 Pro Val Pro Val Pro Asp Gln Pro Leu Pro Lys Val Leu Ile Pro Lys  
   1045               1050               1055  
 Ser Ile Asn Ser Ala Lys Ser Asn Arg Ser Lys Thr Leu Pro Asn Thr  
   1060               1065               1070  
 Glu Gly Thr Gly Arg Glu Ser Gln Asn Asn Leu Lys Arg Arg Phe Thr  
   1075               1080               1085  
 Thr Glu Pro Ile Leu Lys Gly Glu Glu Thr Glu Asn Asn Asp Ile Leu  
   1090               1095               1100  
 Gln Asn Lys Lys Leu His Gln  
   1105               1110

<210> 29  
 <211> 706  
 <212> PRT  
 <213> *Saccharomyces cerevisiae*

<400> 29  
 Met Ile Gln Lys Met Ser Pro Ser Leu Arg Arg Pro Ser Thr Arg Ser  
   1               5               10               15  
 Ser Ser Gly Ser Ser Asn Ile Pro Gln Ser Pro Ser Val Arg Ser Thr  
   20               25               30  
 Ser Ser Phe Ser Asn Leu Thr Arg Asn Ser Ile Arg Ser Thr Ser Asn  
   35               40               45  
 Ser Gly Ser Gln Ser Ile Ser Ala Ser Ser Thr Arg Ser Asn Ser Pro  
   50               55               60  
 Leu Arg Ser Val Ser Ala Lys Ser Asp Pro Phe Leu His Pro Gly Arg  
   65               70               75               80  
 Ile Arg Ile Arg Arg Ser Asp Ser Ile Asn Asn Asn Ser Arg Lys Asn  
   85               90               95  
 Asp Thr Tyr Thr Gly Ser Ile Thr Val Thr Ile Arg Pro Lys Pro Arg  
   100               105               110  
 Ser Val Gly Thr Ser Arg Asp His Val Gly Leu Lys Ser Pro Arg Tyr  
   115               120               125  
 Ser Gln Pro Arg Ser Asn Ser His His Gly Ser Asn Thr Phe Val Arg  
   130               135               140  
 Asp Pro Trp Phe Ile Thr Asn Asp Lys Thr Ile Val His Glu Glu Ile  
   145               150               155               160  
 Gly Glu Phe Lys Phe Asp His Val Phe Ala Ser His Cys Thr Asn Leu  
   165               170               175  
 Glu Val Tyr Glu Arg Thr Ser Lys Pro Met Ile Asp Lys Leu Leu Met  
   180               185               190  
 Gly Phe Asn Ala Thr Ile Phe Ala Tyr Gly Met Thr Gly Ser Gly Lys  
   195               200               205  
 Thr Phe Thr Met Ser Gly Asn Glu Gln Glu Leu Gly Leu Ile Pro Leu  
   210               215               220

## 8471-010 b.txt

Ser Val Ser Tyr Leu Phe Thr Asn Ile Met Glu Gln Ser Met Asn Gly  
 225 230 235 240  
 Asp Lys Lys Phe Asp Val Ile Ile Ser Tyr Leu Glu Ile Tyr Asn Glu  
 245 250 255  
 Arg Ile Tyr Asp Leu Leu Glu Ser Gly Leu Glu Glu Ser Gly Ser Arg  
 260 265 270  
 Ile Ser Thr Pro Ser Arg Leu Tyr Met Ser Lys Ser Asn Ser Asn Gly  
 275 280 285  
 Leu Gly Val Glu Leu Lys Ile Arg Asp Asp Ser Gln Tyr Gly Val Lys  
 290 295 300  
 Val Ile Gly Leu Thr Glu Arg Arg Cys Glu Ser Ser Glu Glu Leu Leu  
 305 310 315 320  
 Arg Trp Ile Ala Val Gly Asp Lys Ser Arg Lys Ile Gly Glu Thr Asp  
 325 330 335  
 Tyr Asn Ala Arg Ser Ser Arg Ser His Ala Ile Val Leu Ile Arg Leu  
 340 345 350  
 Thr Ser Thr Asn Val Lys Asn Gly Thr Ser Arg Ser Ser Thr Leu Ser  
 355 360 365  
 Leu Cys Asp Leu Ala Gly Ser Glu Arg Ala Thr Gly Gln Gln Glu Arg  
 370 375 380  
 Arg Lys Glu Gly Ser Phe Ile Asn Lys Ser Leu Leu Ala Leu Gly Thr  
 385 390 395 400  
 Val Ile Ser Lys Leu Ser Ala Asp Lys Met Asn Ser Val Gly Ser Asn  
 405 410 415  
 Ile Pro Ser Pro Ser Ala Ser Gly Ser Ser Ser Ser Gly Asn Ala  
 420 425 430  
 Thr Asn Asn Gly Thr Ser Pro Ser Asn His Ile Pro Tyr Arg Asp Ser  
 435 440 445  
 Lys Leu Thr Arg Leu Leu Gln Pro Ala Leu Ser Gly Asp Ser Ile Val  
 450 455 460  
 Thr Thr Ile Cys Thr Val Asp Thr Arg Asn Asp Ala Ala Ala Glu Thr  
 465 470 475 480  
 Met Asn Thr Leu Arg Phe Ala Ser Arg Ala Lys Asn Val Ala Leu His  
 485 490 495  
 Val Ser Lys Lys Ser Ile Ile Ser Asn Gly Asn Asn Asp Gly Asp Lys  
 500 505 510  
 Asp Arg Thr Ile Glu Leu Leu Arg Arg Gln Leu Glu Glu Gln Arg Arg  
 515 520 525  
 Met Ile Ser Glu Leu Lys Asn Arg Ser Asn Ile Gly Glu Pro Leu Thr  
 530 535 540  
 Lys Ser Ser Asn Glu Ser Thr Tyr Lys Asp Ile Lys Ala Thr Gly Asn  
 545 550 555 560  
 Asp Gly Asp Pro Asn Leu Ala Leu Met Arg Ala Glu Asn Arg Val Leu  
 565 570 575  
 Lys Tyr Lys Leu Glu Asn Cys Glu Lys Leu Leu Asp Lys Asp Val Val  
 580 585 590  
 Asp Leu Gln Asp Ser Glu Ile Met Glu Ile Val Glu Met Leu Pro Phe  
 595 600 605  
 Glu Val Gly Thr Leu Leu Glu Thr Lys Phe Gln Gly Leu Glu Ser Gln  
 610 615 620  
 Ile Arg Gln Tyr Arg Lys Tyr Thr Gln Lys Leu Glu Asp Lys Ile Met  
 625 630 635 640  
 Ala Leu Glu Lys Ser Gly His Thr Ala Met Ser Leu Thr Gly Cys Asp

## 8471-010 b.txt

	645	650	655
Gly Thr Glu Val Ile Glu Leu Gln Lys Met Leu Glu Arg Lys Asp Lys			
660	665	670	
Met Ile Glu Ala Leu Gln Ser Ala Lys Arg Leu Arg Asp Arg Ala Leu			
675	680	685	
Lys Pro Leu Ile Asn Thr Gln Gln Ser Pro His Pro Val Val Asp Asn			
690	695	700	
Asp Lys			
705			

<210> 30  
<211> 540  
<212> PRT  
<213> Caenorhabditis elegans

	400	30	
Met Ser Asn Met Ser Gln Asp Asp Val Thr Thr Gly Leu Arg Thr Val			
1	5	10	15
Gln Gln Gly Leu Glu Ala Leu Arg Glu Glu His Ser Thr Ile Ser Asn			
20	25	30	
Thr Leu Glu Thr Ser Val Lys Gly Val Lys Glu Asp Glu Ala Pro Leu			
35	40	45	
Pro Lys Gln Lys Leu Ser Gln Ile Asn Asp Asn Leu Asp Lys Leu Val			
50	55	60	
Cys Gly Val Asp Glu Thr Ser Leu Met Leu Met Val Phe Gln Leu Thr			
65	70	75	80
Gln Gly Met Asp Ala Gln His Gln Lys Tyr Gln Ala Gln Arg Arg Arg			
85	90	95	
Leu Cys Gln Glu Asn Ala Trp Leu Arg Asp Glu Leu Ser Ser Thr Gln			
100	105	110	
Ile Lys Leu Gln Gln Ser Glu Gln Met Val Ala Gln Leu Glu Glu Glu			
115	120	125	
Asn Lys His Leu Lys Tyr Met Ala Ser Ile Lys Gln Leu Asp Asp Gly			
130	135	140	
Thr Gln Ser Asp Thr Lys Thr Ser Val Asp Val Gly Pro Gln Pro Val			
145	150	155	160
Thr Asn Glu Thr Leu Gln Glu Leu Gly Phe Gly Pro Glu Asp Glu Glu			
165	170	175	
Asp Met Asn Ala Ser Gln Phe Asn Gln Pro Thr Pro Ala Asn Gln Met			
180	185	190	
Ala Ala Ser Ala Asn Val Gly Tyr Glu Ile Pro Ala Arg Leu Arg Thr			
195	200	205	
Leu His Asn Leu Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val			
210	215	220	
Ala Val Pro Leu Cys Lys Gln Ala Leu Glu Asp Leu Glu Lys Thr Ser			
225	230	235	240
Gly His Asp His Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu			
245	250	255	
Val Tyr Arg Asp Gln Asn Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn			
260	265	270	
Glu Ala Leu Ser Ile Arg Glu Lys Cys Leu Gly Glu Ser His Pro Ala			
275	280	285	
Val Ala Ala Thr Leu Asn Asn Leu Ala Val Leu Phe Gly Lys Arg Gly			

## 8471-010 b.txt

290	295	300
Lys Phe Lys Asp Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg		
305	310	315
Glu Lys Val Leu Gly Asp Asp His Pro Asp Val Ala Lys Gln Leu Asn		
325	330	335
Asn Leu Ala Leu Leu Cys Gln Asn Gln Gly Lys Tyr Glu Glu Val Glu		
340	345	350
Lys Tyr Tyr Lys Arg Ala Leu Glu Ile Tyr Glu Ser Lys Leu Gly Pro		
355	360	365
Asp Asp Pro Asn Val Ala Lys Thr Lys Asn Asn Leu Ser Ser Ala Tyr		
370	375	380
Leu Lys Gln Gly Lys Tyr Lys Glu Ala Glu Glu Leu Tyr Lys Gln Ile		
385	390	395
Leu Thr Arg Ala His Glu Arg Glu Phe Gly Gln Ile Ser Gly Glu Asn		
405	410	415
Lys Pro Ile Trp Gln Ile Ala Glu Glu Arg Glu Glu Asn Lys His Lys		
420	425	430
Gly Glu Gly Ala Thr Ala Asn Glu Gln Ala Gly Trp Ala Lys Ala Ala		
435	440	445
Lys Val Asp Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala		
450	455	460
Leu Tyr Arg Arg Gln Gly Lys Tyr Glu Ala Ala Glu Thr Leu Glu Asp		
465	470	475
Val Ala Leu Arg Ala Lys Lys Gln His Glu Pro Leu Arg Ser Gly Ala		
485	490	495
Met Gly Gly Ile Asp Glu Met Ser Gln Ser Met Met Ala Ser Thr Ile		
500	505	510
Gly Gly Ser Arg Asn Ser Met Thr Thr Ser Thr Ser Gln Thr Gly Leu		
515	520	525
Lys Asn Lys Leu Met Asn Ala Leu Gly Phe Asn Ser		
530	535	540

&lt;210&gt; 31

&lt;211&gt; 508

&lt;212&gt; PRT

&lt;213&gt; Drosophila melanogaster

&lt;400&gt; 31

Met Thr Gln Met Ser Gln Asp Glu Ile Ile Thr Asn Thr Lys Thr Val		
1	5	10
Leu Gln Gly Leu Glu Ala Leu Arg Val Glu His Val Ser Ile Met Asn		
20	25	30
Gly Ile Ala Glu Val Gln Lys Asp Asn Glu Lys Ser Asp Met Leu Arg		
35	40	45
Lys Asn Ile Glu Asn Ile Glu Leu Gly Leu Ser Glu Ala Gln Val Met		
50	55	60
Met Ala Leu Thr Ser His Leu Gln Asn Ile Glu Ala Glu Lys His Lys		
65	70	75
Leu Lys Thr Gln Val Arg Arg Leu His Gln Glu Asn Ala Trp Leu Arg		
85	90	95
Asp Glu Leu Ala Asn Thr Gln Gln Lys Phe Gln Ala Ser Glu Gln Leu		
100	105	110
Val Ala Gln Leu Glu Glu Lys Lys His Leu Glu Phe Met Ala Ser		

## 8471-010 b.txt

115	120	125
Val Lys Lys Tyr Asp Glu Asn Gln Glu Gln Asp Asp Ala Cys Asp Lys		
130	135	140
Ser Arg Thr Asp Pro Val Val Glu Leu Phe Pro Asp Glu Glu Asn Glu		
145	150	155
Asp Arg His Asn Met Ser Pro Thr Pro Pro Ser Gln Phe Ala Asn Gln		
165	170	175
Thr Ser Gly Tyr Glu Ile Pro Ala Arg Leu Arg Thr Leu His Asn Leu		
180	185	190
Val Ile Gln Tyr Ala Ser Gln Gly Arg Tyr Glu Val Ala Val Pro Leu		
195	200	205
Cys Lys Gln Ala Leu Glu Asp Leu Glu Arg Thr Ser Gly His Asp His		
210	215	220
Pro Asp Val Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr Arg Asp		
225	230	235
Gln Asn Lys Tyr Lys Glu Ala Ala Asn Leu Leu Asn Asp Ala Leu Ser		
245	250	255
Ile Arg Gly Lys Thr Leu Gly Glu Asn His Pro Ala Val Ala Ala Thr		
260	265	270
Leu Asn Asn Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys Asp		
275	280	285
Ala Glu Pro Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val Leu		
290	295	300
Gly Lys Asp His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu Ala Leu		
305	310	315
Leu Cys Gln Asn Gln Gly Lys Tyr Asp Glu Val Glu Lys Tyr Tyr Gln		
325	330	335
Arg Ala Leu Asp Ile Tyr Glu Ser Lys Leu Gly Pro Asp Asp Pro Asn		
340	345	350
Val Ala Lys Thr Lys Asn Asn Leu Ala Gly Cys Tyr Leu Lys Gln Gly		
355	360	365
Arg Tyr Thr Glu Ala Glu Ile Leu Tyr Lys Gln Val Leu Thr Arg Ala		
370	375	380
His Glu Arg Glu Phe Gly Ala Ile Asp Ser Lys Asn Lys Pro Ile Trp		
385	390	395
Gln Val Ala Glu Glu Arg Glu Glu His Lys Phe Asp Asn Arg Glu Asn		
405	410	415
Thr Pro Tyr Gly Glu Tyr Gly Gly Trp His Lys Ala Ala Lys Val Asp		
420	425	430
Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala Leu Tyr Arg		
435	440	445
Arg Gln Gly Met Phe Glu Ala Ala Glu Thr Leu Glu Asp Cys Ala Met		
450	455	460
Arg Ser Lys Lys Glu Ala Tyr Asp Leu Ala Lys Gln Thr Lys Leu Ser		
465	470	475
Gln Leu Leu Thr Ser Asn Glu Lys Arg Arg Ser Lys Ala Ile Lys Glu		
485	490	495
Asp Leu Asp Phe Ser Glu Glu Lys Asn Ala Lys Pro		
500	505	

&lt;210&gt; 32

&lt;211&gt; 571

&lt;212&gt; PRT

&lt;213&gt; Loligo pealeii

&lt;400&gt; 32

Met	Glu	Val	Thr	Gln	Thr	Val	Lys	Ser	Tyr	Arg	Ile	Lys	Ile	Glu	
1				5					10					15	
Glu	Ile	Gly	Lys	Met	Thr	Ala	Leu	Ser	Gln	Glu	Glu	Ile	Ile	Ser	Asn
				20				25						30	
Thr	Lys	Thr	Val	Ile	Gln	Gly	Leu	Asp	Thr	Leu	Lys	Asn	Glu	His	Asn
				35			40			45					
Gln	Ile	Leu	Asn	Ser	Leu	Leu	Thr	Ser	Met	Lys	Thr	Ile	Arg	Lys	Glu
				50			55			60					
Asn	Gly	Asp	Thr	Asn	Leu	Val	Glu	Glu	Lys	Ala	Asn	Ile	Leu	Lys	Lys
65					70			75						80	
Ser	Val	Asp	Ser	Ile	Glu	Leu	Gly	Leu	Glu	Ala	Gln	Val	Met	Met	
				85			90						95		
Ala	Leu	Ala	Asn	His	Leu	Gln	His	Thr	Glu	Ala	Glu	Lys	Gln	Lys	Leu
				100			105					110			
Arg	Ala	Gln	Val	Arg	Arg	Leu	Cys	Gln	Glu	Asn	Ala	Trp	Leu	Arg	Asp
				115			120					125			
Glu	Leu	Ala	Asn	Thr	Gln	Gln	Lys	Leu	Gln	Met	Ser	Glu	Gln	Lys	Val
				130			135				140				
Ala	Thr	Ile	Glu	Glu	Glu	Lys	Lys	His	Leu	Glu	Phe	Met	Asn	Glu	Met
145					150				155					160	
Lys	Lys	Tyr	Asp	Thr	Asn	Glu	Ala	Gln	Val	Asn	Glu	Glu	Lys	Glu	Ser
				165			170					175			
Glu	Gln	Ser	Ser	Leu	Asp	Leu	Gly	Phe	Pro	Asp	Asp	Asp	Asp	Asp	Gly
				180			185				190				
Gly	Gln	Pro	Glu	Val	Leu	Ser	Pro	Thr	Gln	Pro	Ser	Ala	Met	Ala	Gln
				195			200				205				
Ala	Ala	Ser	Gly	Gly	Cys	Glu	Ile	Pro	Ala	Arg	Leu	Arg	Thr	Leu	His
				210			215				220				
Asn	Leu	Val	Ile	Gln	Tyr	Ala	Ser	Gln	Gly	Arg	Tyr	Glu	Val	Ala	Val
225					230				235					240	
Pro	Leu	Cys	Lys	Gln	Ala	Leu	Glu	Asp	Leu	Glu	Lys	Thr	Ser	Gly	His
				245			250				255				
Asp	His	Pro	Asp	Val	Ala	Thr	Met	Leu	Asn	Ile	Leu	Ala	Leu	Val	Tyr
				260			265				270				
Arg	Asp	Gln	Gly	Lys	Tyr	Lys	Glu	Ala	Ala	Asn	Leu	Leu	Asn	Asp	Ala
				275			280				285				
Leu	Gly	Ile	Arg	Glu	Lys	Thr	Leu	Gly	Pro	Asp	His	Pro	Ala	Val	Ala
				290			295				300				
Ala	Thr	Leu	Asn	Asn	Leu	Ala	Val	Leu	Tyr	Gly	Lys	Arg	Gly	Lys	Tyr
305					310				315					320	
Lys	Asp	Ala	Glu	Pro	Leu	Cys	Lys	Arg	Ala	Leu	Val	Ile	Arg	Glu	Lys
				325			330				335				
Val	Leu	Gly	Lys	Asp	His	Pro	Asp	Val	Ala	Lys	Gln	Leu	Asn	Asn	Leu
				340			345				350				
Ala	Leu	Leu	Cys	Gln	Asn	Gln	Gly	Lys	Tyr	Glu	Glu	Val	Glu	Arg	Tyr
				355			360				365				
Tyr	Gln	Arg	Ala	Leu	Glu	Ile	Tyr	Gln	Lys	Glu	Leu	Gly	Pro	Asp	Asp
				370			375				380				
Pro	Asn	Val	Ala	Lys	Thr	Lys	Asn	Asn	Leu	Ala	Ser	Ala	Tyr	Leu	Lys
385					390				395					400	

## 8471-010 b.txt

Gln Gly Lys Tyr Lys Gln Ala Glu Ile Leu Tyr Lys Glu Val Leu Thr  
           405                  410                  415  
 Arg Ala His Glu Lys Glu Phe Gly Lys Val Asp Asp Asp Asn Lys Pro  
           420                  425                  430  
 Ile Trp Met Gln Ala Glu Glu Arg Glu Glu Asn Lys Ala Lys Tyr Lys  
           435                  440                  445  
 Asp Gly Ala Pro Gln Pro Asp Tyr Gly Ser Trp Leu Lys Ala Val Lys  
           450                  455                  460  
 Val Asp Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala Leu  
           465                  470                  475                  480  
 Tyr Arg Arg Gln Gly Lys Tyr Glu Ala Ala Glu Thr Leu Glu Glu Cys  
           485                  490                  495  
 Ala Leu Arg Ser Arg Lys Ser Ala Leu Glu Val Val Arg Gln Thr Lys  
           500                  505                  510  
 Ile Ser Asp Val Leu Gly Ser Asp Phe Ser Lys Gly Gln Ser Pro Lys  
           515                  520                  525  
 Asp Arg Lys Arg Ser Asn Ser Arg Asp Arg Asn Arg Arg Asp Ser Met  
           530                  535                  540  
 Asp Ser Val Ser Tyr Glu Lys Ser Gly Asp Gly Asp Glu His Glu Lys  
           545                  550                  555                  560  
 Ser Lys Leu His Val Gly Thr Ser His Lys Gln  
           565                  570

&lt;210&gt; 33

&lt;211&gt; 686

&lt;212&gt; PRT

&lt;213&gt; Strongylocentrotus purpuratus

&lt;400&gt; 33

Met Ser Gly Ser Lys Leu Ser Thr Pro Asn Asn Ser Gly Gly Gln  
   1              5                  10                  15  
 Gly Asn Leu Ser Gln Glu Gln Ile Ile Thr Gly Thr Arg Glu Val Ile  
   20                  25                  30  
 Lys Gly Leu Glu Gln Leu Lys Asn Glu His Asn Asp Ile Leu Asn Ser  
   35                  40                  45  
 Leu Tyr Gln Ser Leu Lys Met Leu Lys Lys Asp Thr Pro Gly Asp Ser  
   50                  55                  60  
 Asn Leu Val Glu Glu Lys Thr Asp Ile Ile Glu Lys Ser Leu Glu Ser  
   65                  70                  75                  80  
 Leu Glu Leu Gly Leu Gly Glu Ala Lys Val Met Met Ala Leu Gly His  
   85                  90                  95  
 His Leu Asn Met Val Glu Ala Glu Lys Gln Lys Leu Arg Ala Gln Val  
   100                  105                  110  
 Arg Arg Leu Val Gln Glu Asn Thr Trp Leu Arg Asp Glu Leu Ala Ala  
   115                  120                  125  
 Thr Gln Gln Lys Leu Gln Thr Ser Glu Gln Asn Leu Ala Asp Leu Glu  
   130                  135                  140  
 Val Lys Tyr Lys His Leu Glu Tyr Met Asn Ser Ile Lys Lys Tyr Asp  
   145                  150                  155                  160  
 Glu Asp Arg Thr Pro Asp Glu Glu Ala Ser Ser Ser Asp Pro Leu Asp  
   165                  170                  175  
 Leu Gly Phe Pro Glu Asp Asp Asp Gly Gly Gln Ala Asp Glu Ser Tyr  
   180                  185                  190

## 8471-010 b.txt

Pro Gln Pro Gln Thr Gly Ser Gly Ser Val Ser Ala Ala Ala Gly Gly  
 195 200 205  
 Tyr Glu Ile Pro Ala Arg Leu Arg Thr Leu His Asn Leu Val Ile Gln  
 210 215 220  
 Tyr Ala Ser Gln Ser Arg Tyr Glu Val Ala Val Pro Leu Cys Lys Gln  
 225 230 235 240  
 Ala Leu Glu Asp Leu Glu Lys Thr Ser Gly His Asp His Pro Asp Val  
 245 250 255  
 Ala Thr Met Leu Asn Ile Leu Ala Leu Val Tyr Arg Asp Gln Asn Lys  
 260 265 270  
 Tyr Lys Glu Ala Gly Asn Leu Leu His Asp Ala Leu Ala Ile Arg Glu  
 275 280 285  
 Lys Thr Leu Gly Pro Asp His Pro Ala Val Ala Ala Thr Leu Asn Asn  
 290 295 300  
 Leu Ala Val Leu Tyr Gly Lys Arg Gly Lys Tyr Lys Glu Ala Glu Pro  
 305 310 315 320  
 Leu Cys Lys Arg Ala Leu Glu Ile Arg Glu Lys Val Leu Gly Lys Asp  
 325 330 335  
 His Pro Asp Val Ala Lys Gln Leu Asn Asn Leu Ala Leu Leu Cys Gln  
 340 345 350  
 Asn Gln Gly Lys Tyr Glu Glu Val Glu Trp Tyr Tyr Gln Arg Ala Leu  
 355 360 365  
 Glu Ile Tyr Glu Lys Lys Leu Gly Pro Asp Asp Pro Asn Val Ala Lys  
 370 375 380  
 Thr Lys Asn Asn Leu Ala Ala Ala Tyr Leu Lys Gln Gly Lys Tyr Lys  
 385 390 395 400  
 Ala Ala Glu Thr Leu Tyr Lys Gln Val Leu Thr Arg Ala His Glu Arg  
 405 410 415  
 Glu Phe Gly Leu Ser Ala Asp Asp Lys Asp Asn Lys Pro Ile Trp Met  
 420 425 430  
 Gln Ala Glu Glu Arg Glu Glu Lys Gly Lys Phe Lys Asp Asn Ala Pro  
 435 440 445  
 Tyr Gly Asp Tyr Gly Trp His Lys Ala Ala Lys Val Asp Ser Arg  
 450 455 460  
 Ser Arg Ser Ser Pro Thr Val Thr Thr Leu Lys Asn Leu Gly Ala  
 465 470 475 480  
 Leu Tyr Arg Arg Gln Gly Lys Tyr Asp Ala Ala Glu Ile Leu Glu Glu  
 485 490 495  
 Cys Ala Met Lys Ser Arg Arg Asn Ala Leu Asp Met Val Arg Glu Thr  
 500 505 510  
 Lys Val Arg Glu Leu Leu Gly Gln Asp Leu Ser Thr Asp Val Pro Arg  
 515 520 525  
 Ser Glu Ala Met Ala Lys Glu Arg His His Arg Arg Ser Ser Gly Thr  
 530 535 540  
 Pro Arg His Gly Ser Thr Glu Ser Val Ser Tyr Glu Lys Thr Asp Gly  
 545 550 555 560  
 Ser Glu Glu Val Ser Ile Gly Val Ala Trp Lys Ala Lys Arg Lys Ala  
 565 570 575  
 Lys Asp Arg Ser Arg Ser Ile Pro Ala Gly Tyr Val Glu Ile Pro Arg  
 580 585 590  
 Ser Pro Pro His Val Leu Val Glu Asn Gly Asp Gly Lys Leu Arg Arg  
 595 600 605  
 Ser Gly Ser Leu Ser Lys Leu Arg Ala Ser Val Arg Arg Ser Ser Thr

## 8471-010 b.txt

610	615	620
Lys Leu Leu Asn Lys Leu	Lys Gly Arg Glu Ser Asp Asp Asp Gly Gly	
625	630	635 640
Met Lys Arg Ala Ser Ser Met Ser Val Leu Pro Ser Arg Gly Asn Asp		
645	650	655
Glu Ser Thr Pro Ala Pro Ile Gln Leu Ser Gln Arg Gly Arg Val Gly		
660	665	670
Ser His Asp Asn Leu Ser Ser Arg Arg Gln Ser Gly Asn Phe		
675	680	685

&lt;210&gt; 34

&lt;211&gt; 452

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 34

Met Arg Arg Ala Leu Gly Thr Leu Gly Cys Cys Leu Ala Leu Leu Leu		
1 5 10 15		
Pro Leu Leu Pro Ala Ala Arg Gly Val Pro His Arg His Arg Arg Gln		
20 25 30		
Pro Leu Gly Ser Gly Leu Gly Arg His Gly Ala Ala Asp Thr Ala Cys		
35 40 45		
Lys Asn Arg Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser		
50 55 60		
Val Arg Pro Glu Glu Phe Glu Lys Val Lys Ile Phe Leu Ser Lys Met		
65 70 75 80		
Ile Asp Thr Leu Asp Val Gly Glu Arg Thr Thr Arg Val Ala Val Met		
85 90 95		
Asn Tyr Ala Ser Thr Val Lys Val Glu Phe Pro Leu Arg Thr Tyr Phe		
100 105 110		
Asp Lys Ala Ser Met Lys Glu Ala Val Ser Arg Ile Gln Pro Leu Ser		
115 120 125		
Ala Gly Thr Met Thr Gly Leu Ala Ile Gln Ala Ala Met Asp Glu Val		
130 135 140		
Phe Thr Glu Glu Met Gly Thr Arg Pro Ala Asn Phe Asn Ile Pro Lys		
145 150 155 160		
Val Val Ile Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Glu Asn		
165 170 175		
Val Ala Ala Asn Ala Arg Thr Ala Gly Ile Glu Ile Tyr Ala Val Gly		
180 185 190		
Val Gly Arg Ala Asp Met Gln Ser Leu Arg Ile Met Ala Ser Glu Pro		
195 200 205		
Leu Asp Glu His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys		
210 215 220		
Leu Thr Ser Lys Phe Arg Glu Thr Phe Cys Ala Ala Asn Thr Cys Ala		
225 230 235 240		
Leu Gly Thr His Asp Cys Glu Gln Val Cys Val Ser Asn Asp Gly Ser		
245 250 255		
Tyr Leu Cys Asp Cys Tyr Glu Gly Tyr Thr Leu Asn Pro Asp Lys Arg		
260 265 270		
Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Glu Cys Asp		
275 280 285		
Gln Ile Cys Val Ser Asn Asn Gly Ser Tyr Val Cys Glu Cys Phe Glu		

## 8471-010 b.txt

290	295	300
Gly Tyr Thr Leu Asn Pro Asp Lys Lys Thr Cys Ser Ala Met Asp Val		
305	310	315
Cys Ala Pro Gly Arg His Asp Cys Ala Gln Val Cys Arg Arg Asn Gly		
325	330	335
Gly Ser Tyr Ser Cys Asp Cys Phe Glu Gly Phe Thr Leu Asn Pro Asp		
340	345	350
Lys Lys Thr Cys Ser Ala Val Asp Val Cys Ala Pro Gly Arg His Asp		
355	360	365
Cys Glu Gln Val Cys Val Arg Asp Asp Leu Phe Tyr Thr Cys Asp Cys		
370	375	380
Tyr Gln Gly Tyr Val Leu Asn Pro Asp Lys Lys Thr Cys Ser Arg Ala		
385	390	395
Thr Thr Ser Ser Leu Val Thr Asp Glu Glu Ala Cys Lys Cys Glu Ala		
405	410	415
Ile Ala Ala Leu Gln Asp Ser Val Thr Ser Arg Leu Glu Ala Leu Ser		
420	425	430
Thr Lys Leu Asp Glu Val Ser Gln Lys Leu Gln Ala Tyr Gln Asp Arg		
435	440	445
Gln Gln Val Val		
450		

&lt;210&gt; 35

&lt;211&gt; 486

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 35

Met Pro Arg Pro Ala Pro Ala Arg Arg Leu Pro Gly Leu Leu Leu			
1	5	10	15
Leu Trp Pro Leu Leu Leu Pro Ser Ala Ala Pro Asp Pro Val Ala			
20	25	30	
Arg Pro Gly Phe Arg Arg Leu Glu Thr Arg Gly Pro Gly Gly Ser Pro			
35	40	45	
Gly Arg Arg Pro Ser Pro Ala Ala Pro Asp Gly Ala Pro Ala Ser Gly			
50	55	60	
Thr Ser Glu Pro Gly Arg Ala Arg Gly Ala Gly Val Cys Lys Ser Arg			
65	70	75	80
Pro Leu Asp Leu Val Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro			
85	90	95	
Leu Glu Phe Thr Lys Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr			
100	105	110	
Leu Asp Ile Gly Pro Ala Asp Thr Arg Val Ala Val Val Asn Tyr Ala			
115	120	125	
Ser Thr Val Lys Ile Glu Phe Gln Leu Gln Ala Tyr Thr Asp Lys Gln			
130	135	140	
Ser Leu Lys Gln Ala Val Gly Arg Ile Thr Pro Leu Ser Thr Gly Thr			
145	150	155	160
Met Ser Gly Leu Ala Ile Gln Thr Ala Met Asp Glu Ala Phe Thr Val			
165	170	175	
Glu Ala Gly Ala Arg Glu Pro Ser Ser Asn Ile Pro Lys Val Ala Ile			
180	185	190	
Ile Val Thr Asp Gly Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala			

## 8471-010 b.txt

195	200	205
Arg Ala Gln Ala Ser Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg		
210	215	220
Ala Asp Met Ala Ser Leu Lys Met Met Ala Ser Glu Pro Leu Glu Glu		
225	230	235
His Val Phe Tyr Val Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ser		
245	250	255
Arg Phe Gln Glu Thr Phe Cys Ala Leu Asp Pro Cys Val Leu Gly Thr		
260	265	270
His Gln Cys Gln His Val Cys Ile Ser Asp Gly Glu Gly Lys His His		
275	280	285
Cys Glu Cys Ser Gln Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys		
290	295	300
Ser Ala Leu Asp Arg Cys Ala Leu Asn Thr His Gly Cys Glu His Ile		
305	310	315
Cys Val Asn Asp Arg Ser Gly Ser Tyr His Cys Glu Cys Tyr Glu Gly		
325	330	335
Tyr Thr Leu Asn Glu Asp Arg Lys Thr Cys Ser Ala Gln Asp Lys Cys		
340	345	350
Ala Leu Gly Thr His Gly Cys Gln His Ile Cys Val Asn Asp Arg Thr		
355	360	365
Gly Ser His His Cys Glu Cys Tyr Glu Gly Tyr Thr Leu Asn Ala Asp		
370	375	380
Lys Lys Thr Cys Ser Val Arg Asp Lys Cys Ala Leu Gly Ser His Gly		
385	390	395
Cys Gln His Ile Cys Val Ser Asp Gly Ala Ala Ser Tyr His Cys Asp		
405	410	415
Cys Tyr Pro Gly Tyr Thr Leu Asn Glu Asp Lys Lys Thr Cys Ser Ala		
420	425	430
Thr Glu Glu Ala Arg Arg Leu Val Ser Thr Glu Asp Ala Cys Gly Cys		
435	440	445
Glu Ala Thr Leu Ala Phe Gln Asp Lys Val Ser Ser Tyr Leu Gln Arg		
450	455	460
Leu Asn Thr Lys Leu Asp Asp Ile Leu Glu Lys Leu Lys Ile Asn Glu		
465	470	475
Tyr Gly Gln Ile His Arg		
485		

&lt;210&gt; 36

&lt;211&gt; 481

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 36

Met Leu Leu Ser Ala Pro Leu Arg His Leu Pro Gly Leu Leu Leu			
1	5	10	15
Leu Trp Pro Leu Leu Leu Pro Ser Leu Ala Ala Pro Gly Arg Leu			
20	25	30	
Ala Arg Ala Ser Val Arg Arg Leu Gly Thr Arg Val Pro Gly Gly Ser			
35	40	45	
Pro Gly His Leu Ser Ala Leu Ala Thr Ser Thr Arg Ala Pro Tyr Ser			
50	55	60	
Gly Gly Arg Gly Ala Gly Val Cys Lys Ser Arg Pro Leu Asp Leu Val			

## 8471-010 b.txt

65	70	75	80
Phe Ile Ile Asp Ser Ser Arg Ser Val Arg Pro Leu Glu Phe Thr Lys			
85	90	95	
Val Lys Thr Phe Val Ser Arg Ile Ile Asp Thr Leu Asp Ile Gly Ala			
100	105	110	
Thr Asp Thr Arg Val Ala Val Val Asn Tyr Ala Ser Thr Val Lys Ile			
115	120	125	
Glu Phe Gln Leu Asn Thr Tyr Ser Asp Lys Gln Ala Leu Lys Gln Ala			
130	135	140	
Val Ala Arg Ile Thr Pro Leu Ser Thr Gly Thr Met Ser Gly Leu Ala			
145	150	155	160
Ile Gln Thr Ala Met Glu Glu Ala Phe Thr Val Glu Ala Gly Ala Arg			
165	170	175	
Gly Pro Met Ser Asn Ile Pro Lys Val Ala Ile Ile Val Thr Asp Gly			
180	185	190	
Arg Pro Gln Asp Gln Val Asn Glu Val Ala Ala Arg Ala Arg Ala Ser			
195	200	205	
Gly Ile Glu Leu Tyr Ala Val Gly Val Asp Arg Ala Asp Met Glu Ser			
210	215	220	
Leu Lys Met Met Ala Ser Lys Pro Leu Glu Glu His Val Phe Tyr Val			
225	230	235	240
Glu Thr Tyr Gly Val Ile Glu Lys Leu Ser Ala Arg Phe Gln Glu Thr			
245	250	255	
Phe Cys Ala Leu Asp Gln Cys Met Leu Gly Thr His Gln Cys Gln His			
260	265	270	
Val Cys Val Ser Asp Gly Asp Gly Lys His His Cys Glu Cys Ser Gln			
275	280	285	
Gly Tyr Thr Leu Asn Ala Asp Gly Lys Thr Cys Ser Ala Ile Asp Lys			
290	295	300	
Cys Ala Leu Ser Thr His Gly Cys Glu Gln Ile Cys Ile Asn Asp Arg			
305	310	315	320
Asn Gly Ser Tyr His Cys Glu Cys Tyr Gly Gly Tyr Ala Leu Asn Ala			
325	330	335	
Asp Arg Arg Thr Cys Ala Ala Leu Asp Lys Cys Ala Ser Gly Thr His			
340	345	350	
Gly Cys Gln His Ile Cys Val Asn Asp Gly Ala Gly Ser His His Cys			
355	360	365	
Glu Cys Phe Glu Gly Tyr Thr Leu Asn Ala Asp Lys Lys Thr Cys Ser			
370	375	380	
Val Arg Asn Lys Cys Ala Leu Gly Thr His Gly Cys Gln His Ile Cys			
385	390	395	400
Val Ser Asp Gly Ala Val Ala Tyr His Cys Asp Cys Phe Pro Gly Tyr			
405	410	415	
Thr Leu Asn Asp Asp Lys Lys Thr Cys Ser Asp Ile Glu Glu Ala Arg			
420	425	430	
Ser Leu Ile Ser Ile Glu Asp Ala Cys Gly Cys Gly Ala Thr Leu Ala			
435	440	445	
Phe Gln Glu Lys Val Ser Ser His Leu Gln Lys Leu Asn Thr Lys Leu			
450	455	460	
Asp Asn Ile Leu Lys Lys Leu Lys Val Thr Glu Tyr Gly Gln Val His			
465	470	475	480
Arg			

<210> 37  
<211> 1507  
<212> PRT  
<213> Drosophila melanogaster

<400> 37

Met	Val	Ser	Leu	Ile	Asp	Thr	Ile	Glu	Ala	Ala	Ala	Glu	Lys	Gln	Lys
1				5				10				15			
Gln	Ser	Gln	Ala	Val	Val	Thr	Asn	Thr	Ser	Ala	Ser	Ser	Ser	Ser	Cys
				20				25				30			
Ser	Ser	Phe	Ser	Ser	Ser	Pro	Pro	Ser	Ser	Ser	Val	Gly	Ser	Pro	
				35				40			45				
Ser	Pro	Gly	Ala	Pro	Lys	Thr	Asn	Leu	Thr	Ala	Ser	Gly	Lys	Pro	Lys
	50				55				60						
Glu	Lys	Arg	Arg	Asn	Asn	Glu	Lys	Arg	Lys	Glu	Lys	Ser	Arg	Asp	Ala
65					70				75			80			
Ala	Arg	Cys	Arg	Arg	Ser	Lys	Glu	Thr	Glu	Ile	Phe	Met	Glu	Leu	Ser
					85				90			95			
Ala	Ala	Leu	Pro	Leu	Lys	Thr	Asp	Asp	Val	Asn	Gln	Leu	Asp	Lys	Ala
					100				105			110			
Ser	Val	Met	Arg	Ile	Thr	Ile	Ala	Phe	Leu	Lys	Ile	Arg	Glu	Met	Leu
		115				120				125					
Gln	Phe	Val	Pro	Ser	Leu	Arg	Asp	Cys	Asn	Asp	Asp	Ile	Lys	Gln	Asp
	130				135					140					
Ile	Glu	Thr	Ala	Glu	Asp	Gln	Gln	Glu	Val	Lys	Pro	Lys	Leu	Glu	Val
145					150				155			160			
Gly	Thr	Glu	Asp	Trp	Leu	Asn	Gly	Ala	Glu	Ala	Arg	Glu	Leu	Leu	Lys
					165				170			175			
Gln	Thr	Met	Asp	Gly	Phe	Leu	Leu	Val	Leu	Ser	His	Glu	Gly	Asp	Ile
			180				185				190				
Thr	Tyr	Val	Ser	Glu	Asn	Val	Val	Glu	Tyr	Leu	Gly	Ile	Thr	Lys	Ile
		195				200				205					
Asp	Thr	Leu	Gly	Gln	Gln	Ile	Trp	Glu	Tyr	Ser	His	Gln	Cys	Asp	His
	210				215				220						
Ala	Glu	Ile	Lys	Glu	Ala	Leu	Ser	Leu	Lys	Arg	Glu	Leu	Ala	Gln	Lys
225					230				235			240			
Val	Lys	Asp	Glu	Pro	Gln	Gln	Asn	Ser	Gly	Val	Ser	Thr	His	His	Arg
					245				250			255			
Asp	Leu	Phe	Val	Arg	Leu	Lys	Cys	Thr	Leu	Thr	Ser	Gly	Arg	Ser	
			260			265				270					
Ile	Asn	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Val	Ile	His	Ile	Thr	Gly	His
		275				280				285					
Leu	Val	Val	Asn	Ala	Lys	Gly	Glu	Arg	Leu	Leu	Met	Ala	Ile	Gly	Arg
	290				295				300						
Pro	Ile	Pro	His	Pro	Ser	Asn	Ile	Glu	Ile	Pro	Leu	Gly	Thr	Ser	Thr
305					310				315			320			
Phe	Leu	Thr	Lys	His	Ser	Leu	Asp	Met	Arg	Phe	Thr	Tyr	Val	Asp	Asp
			325			330			335						
Lys	Met	His	Asp	Leu	Leu	Gly	Tyr	Ser	Pro	Lys	Asp	Leu	Leu	Asp	Thr
			340			345				350					
Ser	Leu	Phe	Ser	Cys	Gln	His	Gly	Ala	Asp	Ser	Glu	Arg	Leu	Met	Ala
	355				360				365						

## 8471-010 b.txt

Thr Phe Lys Ser Val Leu Ser Lys Gly Gln Gly Glu Thr Ser Arg Tyr  
 370 375 380  
 Arg Phe Leu Gly Lys Tyr Gly Gly Tyr Cys Trp Ile Leu Ser Gln Ala  
 385 390 395 400  
 Thr Ile Val Tyr Asp Lys Leu Lys Pro Gln Ser Val Val Cys Val Asn  
 405 410 415  
 Tyr Val Ile Ser Asn Leu Glu Asn Lys His Glu Ile Tyr Ser Leu Ala  
 420 425 430  
 Gln Gln Thr Ala Ala Ser Glu Gln Lys Glu Gln His His Gln Ala Ala  
 435 440 445  
 Glu Thr Glu Lys Glu Pro Glu Lys Ala Ala Asp Pro Glu Ile Ile Ala  
 450 455 460  
 Gln Glu Thr Lys Glu Thr Val Asn Thr Pro Ile His Thr Ser Glu Leu  
 465 470 475 480  
 Gln Ala Lys Pro Leu Gln Leu Glu Ser Glu Lys Ala Glu Lys Thr Ile  
 485 490 495  
 Glu Glu Thr Lys Thr Ile Ala Thr Ile Pro Pro Val Thr Ala Thr Ser  
 500 505 510  
 Thr Ala Asp Gln Ile Lys Gln Leu Pro Glu Ser Asn Pro Tyr Lys Gln  
 515 520 525  
 Ile Leu Gln Ala Glu Leu Leu Ile Lys Arg Glu Asn His Ser Pro Gly  
 530 535 540  
 Pro Arg Thr Ile Thr Ala Gln Leu Leu Ser Gly Ser Ser Ser Gly Leu  
 545 550 555 560  
 Arg Pro Glu Glu Lys Arg Pro Lys Ser Val Thr Ala Ser Val Leu Arg  
 565 570 575  
 Pro Ser Pro Ala Pro Pro Leu Thr Pro Pro Pro Thr Ala Val Leu Cys  
 580 585 590  
 Lys Lys Thr Pro Leu Gly Val Glu Pro Asn Leu Pro Pro Thr Thr Thr  
 595 600 605  
 Ala Thr Ala Ala Ile Ile Ser Ser Ser Asn Gln Gln Leu Gln Ile Ala  
 610 615 620  
 Gln Gln Thr Gln Leu Gln Asn Pro Gln Gln Pro Ala Gln Asp Met Ser  
 625 630 635 640  
 Lys Gly Phe Cys Ser Leu Phe Ala Asp Asp Gly Arg Gly Leu Thr Met  
 645 650 655  
 Leu Lys Glu Glu Pro Asp Asp Leu Ser His His Leu Ala Ser Thr Asn  
 660 665 670  
 Cys Ile Gln Leu Asp Glu Met Thr Pro Phe Ser Asp Met Leu Val Gly  
 675 680 685  
 Leu Met Gly Thr Cys Leu Leu Pro Glu Asp Ile Asn Ser Leu Asp Ser  
 690 695 700  
 Thr Thr Cys Ser Thr Thr Ala Ser Gly Gln His Tyr Gln Ser Pro Ser  
 705 710 715 720  
 Ser Ser Ser Thr Ser Ala Pro Ser Asn Thr Ser Ser Ser Asn Asn Ser  
 725 730 735  
 Tyr Ala Asn Ser Pro Leu Ser Pro Leu Thr Pro Asn Ser Thr Ala Thr  
 740 745 750  
 Ala Ser Asn Pro Ser His Gln Gln Gln Gln His His Asn Gln Gln  
 755 760 765  
 Gln Gln Gln Gln Gln Gln His His Pro Gln His His Asp Asn  
 770 775 780  
 Ser Asn Ser Ser Ser Asn Ile Asp Pro Leu Phe Asn Tyr Arg Glu Glu

## 8471-010 b.txt

785	790	795	800
Ser Asn Asp Thr Ser Cys Ser Gln His Leu His Ser Pro Ser Ile Thr			
805	810	815	
Ser Lys Ser Pro Glu Asp Ser Ser Leu Pro Ser Leu Cys Ser Pro Asn			
820	825	830	
Ser Leu Thr Gln Glu Asp Asp Phe Ser Phe Glu Ala Phe Ala Met Arg			
835	840	845	
Ala Pro Tyr Ile Pro Ile Asp Asp Asp Met Pro Leu Leu Thr Glu Thr			
850	855	860	
Asp Leu Met Trp Cys Pro Pro Glu Asp Leu Gln Thr Met Val Pro Lys			
865	870	875	880
Glu Ile Asp Ala Ile Gln Gln Leu Gln Gln Leu Gln Gln Gln His			
885	890	895	
His Gln Gln Tyr Ala Gly Asn Thr Gly Tyr Gln Gln Gln Gln Gln			
900	905	910	
Pro Gln Leu Gln Gln Gln His Phe Ser Asn Ser Leu Cys Ser Ser Pro			
915	920	925	
Ala Ser Thr Val Ser Ser Leu Ser Pro Ser Pro Val Gln Gln His His			
930	935	940	
Gln Gln Gln Gln Ala Ala Val Phe Thr Ser Asp Ser Ser Glu Leu Ala			
945	950	955	960
Ala Leu Leu Cys Gly Ser Gly Asn Gly Thr Leu Ser Ile Leu Ala Gly			
965	970	975	
Ser Gly Val Thr Val Ala Glu Glu Cys Asn Glu Arg Leu Gln Gln His			
980	985	990	
Gln Gln Gln Gln Gln Gln Thr Ser Gly Asn Glu Phe Arg Thr Phe Gln			
995	1000	1005	
Gln Leu Gln Gln Glu Leu Gln Leu Gln Glu Glu Gln Gln Arg Gln			
1010	1015	1020	
Gln Leu Leu			
1025	1030	1035	1040
Ser Leu Asn Ile Glu Cys Lys Lys Glu Lys Tyr Asp Val Gln Met Gly			
1045	1050	1055	
Gly Ser Leu Cys His Pro Met Glu Asp Ala Phe Glu Asn Asp Tyr Ser			
1060	1065	1070	
Lys Asp Ser Ala Asn Leu Asp Cys Trp Asp Leu Ile Gln Met Gln Val			
1075	1080	1085	
Val Asp Thr Glu Pro Val Ser Pro Asn Ala Ala Ser Pro Thr Pro Cys			
1090	1095	1100	
Lys Val Ser Ala Ile Gln Leu Leu Gln Gln Gln Gln Leu Gln Gln			
1105	1110	1115	1120
Gln Gln Gln Gln Gln Asn Ile Ile Leu Asn Ala Val Pro Leu Ile			
1125	1130	1135	
Thr Ile Gln Asn Asn Lys Glu Leu Met Gln Gln Gln Gln Gln Gln			
1140	1145	1150	
Gln Gln Gln Gln Glu Gln Leu Gln Gln Pro Ala Ile Lys Leu Leu			
1155	1160	1165	
Asn Gly Ala Ser Ile Ala Pro Val Asn Thr Lys Ala Thr Ile Arg Leu			
1170	1175	1180	
Val Glu Ser Lys Pro Pro Thr Thr Gln Ser Arg Met Ala Lys Val			
1185	1190	1195	1200
Asn Leu Val Pro Gln Gln Gln His Gly Asn Lys Arg His Leu Asn			
1205	1210	1215	

## 8471-010 b.txt

Ser Ala Thr Gly Ala Gly Asn Pro Val Glu Ser Lys Arg Leu Lys Ser  
     1220                 1225                 1230  
 Gly Thr Leu Cys Leu Asp Val Gln Ser Pro Gln Leu Leu Gln Gln Leu  
     1235                 1240                 1245  
 Ile Gly Lys Asp Pro Ala Gln Gln Thr Gln Ala Ala Lys Arg Ala  
     1250                 1255                 1260  
 Gly Ser Glu Arg Trp Gln Leu Ser Ala Glu Ser Lys Gln Gln Lys Gln  
     1265                 1270                 1275                 1280  
 Gln Gln Gln Ser Asn Ser Val Leu Lys Asn Leu Leu Val Ser Gly  
     1285                 1290                 1295  
 Arg Asp Asp Asp Ser Glu Ala Met Ile Ile Asp Glu Asp Asn Ser  
     1300                 1305                 1310  
 Leu Val Gln Pro Ile Pro Leu Gly Lys Tyr Gly Leu Pro Leu His Cys  
     1315                 1320                 1325  
 His Thr Ser Thr Ser Val Leu Arg Asp Tyr His Asn Asn Pro Leu  
     1330                 1335                 1340  
 Ile Ser Gly Thr Asn Phe Gln Leu Ser Pro Val Phe Gly Gly Ser Asp  
     1345                 1350                 1355                 1360  
 Ser Ser Gly Gly Asp Gly Glu Thr Gly Ser Val Val Ser Leu Asp Asp  
     1365                 1370                 1375  
 Ser Val Pro Pro Gly Leu Thr Ala Cys Asp Thr Asp Ala Ser Ser Asp  
     1380                 1385                 1390  
 Ser Gly Ile Asp Glu Asn Ser Leu Met Asp Gly Ala Ser Gly Ser Pro  
     1395                 1400                 1405  
 Arg Lys Arg Leu Ser Ser Thr Ser Asn Ser Thr Asn Gln Ala Glu Ser  
     1410                 1415                 1420  
 Ala Pro Pro Ala Leu Asp Val Glu Thr Pro Val Thr Gln Lys Ser Val  
     1425                 1430                 1435                 1440  
 Glu Glu Glu Phe Glu Gly Gly Ser Gly Ser Asn Ala Pro Ser Arg  
     1445                 1450                 1455  
 Lys Thr Ser Ile Ser Phe Leu Asp Ser Ser Asn Pro Leu Leu His Thr  
     1460                 1465                 1470  
 Pro Ala Met Met Asp Leu Val Asn Asp Asp Tyr Ile Met Gly Glu Gly  
     1475                 1480                 1485  
 Gly Phe Glu Phe Ser Asp Asn Gln Leu Glu Gln Val Leu Gly Trp Pro  
     1490                 1495                 1500  
 Glu Ile Ala  
     1505

<210> 38  
 <211> 879  
 <212> PRT  
 <213> Homo sapiens

<400> 38  
 Met Ala Gly Gly Gly Asp Leu Ser Thr Arg Arg Leu Asn Glu Cys  
     1                 5                 10                 15  
 Ile Ser Pro Val Ala Asn Glu Met Asn His Leu Pro Ala His Ser His  
     20                 25                 30  
 Asp Leu Gln Arg Met Phe Thr Glu Asp Gln Gly Val Asp Asp Arg Leu  
     35                 40                 45  
 Leu Tyr Asp Ile Val Phe Lys His Phe Lys Arg Asn Lys Val Glu Ile  
     50                 55                 60

## 8471-010 b.txt

Ser Asn Ala Ile Lys Lys Thr Phe Pro Phe Leu Glu Gly Leu Arg Asp  
 65 70 75 80  
 Arg Asp Leu Ile Thr Asn Lys Met Phe Glu Asp Ser Gln Asp Ser Cys  
 85 90 95  
 Arg Asn Leu Val Pro Val Gln Arg Val Val Tyr Asn Val Leu Ser Glu  
 100 105 110  
 Leu Glu Lys Thr Phe Asn Leu Pro Val Leu Glu Ala Leu Phe Ser Asp  
 115 120 125  
 Val Asn Met Gln Glu Tyr Pro Asp Leu Ile His Ile Tyr Lys Gly Phe  
 130 135 140  
 Glu Asn Val Ile His Asp Lys Leu Pro Leu Gln Glu Ser Glu Glu  
 145 150 155 160  
 Glu Arg Glu Glu Arg Ser Gly Leu Gln Leu Ser Leu Glu Gln Gly Thr  
 165 170 175  
 Gly Glu Asn Ser Phe Arg Ser Leu Thr Trp Pro Pro Ser Gly Ser Pro  
 180 185 190  
 Ser His Ala Gly Thr Thr Pro Pro Glu Asn Gly Leu Ser Glu His Pro  
 195 200 205  
 Cys Glu Thr Glu Gln Ile Asn Ala Lys Arg Lys Asp Thr Thr Ser Asp  
 210 215 220  
 Lys Asp Asp Ser Leu Gly Ser Gln Gln Thr Asn Glu Gln Cys Ala Gln  
 225 230 235 240  
 Lys Ala Glu Pro Thr Glu Ser Cys Glu Gln Ile Ala Val Gln Val Asn  
 245 250 255  
 Asn Gly Asp Ala Gly Arg Glu Met Pro Cys Pro Leu Pro Cys Asp Glu  
 260 265 270  
 Glu Ser Pro Glu Ala Glu Leu His Asn His Gly Ile Gln Ile Asn Ser  
 275 280 285  
 Cys Ser Val Arg Leu Val Asp Ile Lys Lys Glu Lys Pro Phe Ser Asn  
 290 295 300  
 Ser Lys Val Glu Cys Gln Ala Gln Ala Arg Thr His His Asn Gln Ala  
 305 310 315 320  
 Ser Asp Ile Ile Val Ile Ser Ser Glu Asp Ser Glu Gly Ser Thr Asp  
 325 330 335  
 Val Asp Glu Pro Leu Glu Val Phe Ile Ser Ala Pro Arg Ser Glu Pro  
 340 345 350  
 Val Ile Asn Asn Asp Asn Pro Leu Glu Ser Asn Asp Glu Lys Glu Gly  
 355 360 365  
 Gln Glu Ala Thr Cys Ser Arg Pro Gln Ile Val Pro Glu Pro Met Asp  
 370 375 380  
 Phe Arg Lys Leu Ser Thr Phe Arg Glu Ser Phe Lys Lys Arg Val Ile  
 385 390 395 400  
 Gly Gln Asp His Asp Phe Ser Glu Ser Ser Glu Glu Glu Ala Pro Ala  
 405 410 415  
 Glu Ala Ser Ser Gly Ala Leu Arg Ser Lys His Gly Glu Lys Ala Pro  
 420 425 430  
 Met Thr Ser Arg Ser Thr Ser Thr Trp Arg Ile Pro Ser Arg Lys Arg  
 435 440 445  
 Arg Phe Ser Ser Ser Asp Phe Ser Asp Leu Ser Asn Gly Glu Glu Leu  
 450 455 460  
 Gln Glu Thr Cys Ser Ser Ser Leu Arg Arg Gly Ser Gly Ser Gln Pro  
 465 470 475 480  
 Gln Glu Pro Glu Asn Lys Lys Cys Ser Cys Val Met Cys Phe Pro Lys

## 8471-010 b.txt

485	490	495
Gly Val Pro Arg Ser Gln Glu Ala Arg Thr Glu Ser Ser Gln Ala Ser		
500	505	510
Asp Met Met Asp Thr Met Asp Val Glu Asn Asn Ser Thr Leu Glu Lys		
515	520	525
His Ser Gly Lys Arg Arg Lys Lys Arg Arg His Arg Ser Lys Val Asn		
530	535	540
Gly Leu Gln Arg Gly Arg Lys Lys Asp Arg Pro Arg Lys His Leu Thr		
545	550	555
Leu Asn Asn Lys Val Gln Lys Lys Arg Trp Gln Gln Arg Gly Arg Lys		
565	570	575
Ala Asn Thr Arg Pro Leu Lys Arg Arg Lys Arg Gly Pro Arg Ile		
580	585	590
Pro Lys Asp Glu Asn Ile Asn Phe Lys Gln Ser Glu Leu Pro Val Thr		
595	600	605
Cys Gly Glu Val Lys Gly Thr Leu Tyr Lys Glu Arg Phe Lys Gln Gly		
610	615	620
Thr Ser Lys Lys Cys Ile Gln Ser Glu Asp Lys Lys Trp Phe Thr Pro		
625	630	635
Arg Glu Phe Glu Ile Glu Gly Asp Arg Gly Ala Ser Lys Asn Trp Lys		
645	650	655
Leu Ser Ile Arg Cys Gly Gly Tyr Thr Leu Lys Val Leu Met Glu Asn		
660	665	670
Lys Phe Leu Pro Glu Pro Pro Ser Thr Arg Lys Lys Arg Ile Leu Glu		
675	680	685
Ser His Asn Asn Thr Leu Val Asp Pro Cys Glu Glu His Lys Lys Lys		
690	695	700
Asn Pro Asp Ala Ser Val Lys Phe Ser Glu Phe Leu Lys Lys Cys Ser		
705	710	715
Glu Thr Trp Lys Thr Ile Phe Ala Lys Glu Lys Gly Lys Phe Glu Asp		
725	730	735
Met Ala Lys Ala Asp Lys Ala His Tyr Glu Arg Glu Met Lys Thr Tyr		
740	745	750
Ile Pro Pro Lys Gly Glu Lys Lys Lys Phe Lys Asp Pro Asn Ala		
755	760	765
Pro Lys Arg Pro Pro Leu Ala Phe Phe Leu Phe Cys Ser Glu Tyr Arg		
770	775	780
Pro Lys Ile Lys Gly Glu His Pro Gly Leu Ser Ile Asp Asp Val Val		
785	790	795
Lys Lys Leu Ala Gly Met Trp Asn Asn Thr Ala Ala Ala Asp Lys Gln		
805	810	815
Phe Tyr Glu Lys Lys Ala Ala Lys Leu Lys Glu Lys Tyr Lys Lys Asp		
820	825	830
Ile Ala Ala Tyr Arg Ala Lys Gly Lys Pro Asn Ser Ala Lys Lys Arg		
835	840	845
Val Val Lys Ala Glu Lys Ser Lys Lys Lys Glu Glu Glu Glu Asp		
850	855	860
Glu Glu Asp Glu Gln Glu Glu Glu Asn Glu Glu Asp Asp Asp Lys		
865	870	875

&lt;210&gt; 39

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 39

Met Glu Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala  
 20 25 30  
 Glu Asp Arg Cys Lys Gln Leu Glu Glu Gln Gln Gly Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val  
 50 55 60  
 Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln  
 130 135 140  
 Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu  
 165 170 175  
 Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Arg Val Arg Gln  
 180 185 190  
 Leu Glu Glu Leu Arg Thr Met Asp Gln Ser Leu Lys Ser Leu Ile  
 195 200 205  
 Ala Ser Glu Glu Glu Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Leu Leu Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
 245 250 255  
 Glu Glu Ser Leu Ala Ser Ala Lys Glu Glu Asn Val Gly Ile His Gln  
 260 265 270  
 Val Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Leu  
 275 280

&lt;210&gt; 40

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 40

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu

## 8471-010 b.txt

50	55	60
Lys Asp Ala Gln Glu Lys	Leu Glu Leu Ala Glu	Lys Ala Thr Asp
65	70	75 80
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg	Ile Gln Leu Val Glu	
85	90	95
Glu Glu Leu Asp Arg Ala Gln Glu Arg	Leu Ala Thr Ala	Leu Gln Lys
100	105	110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser	Glu Arg Gly Met Lys	
115	120	125
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu	Lys Met Glu Ile Gln	
130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile	Ala Glu Asp Ala Asp Arg	
145	150	155 160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val	Ile Ile Glu Ser Asp Leu	
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser	Glu Gly Lys Cys Ala Glu	
180	185	190
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu	Lys Ser Leu Glu	
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp	Arg Tyr Glu Glu Glu	
210	215	220
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu	Ala Glu Thr Arg Ala Glu	
225	230	235 240
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu	Lys Ser Ile Asp Asp Leu	
245	250	255
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr	Lys Ala Ile Ser Glu	
260	265	270
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser	Ile	
275	280	

<210> 41  
<211> 284  
<212> PRT  
<213> Gallus gallus

<400> 41			
Met Asp Ala Ile Lys Lys Lys	Met Gln Met Leu Lys	Leu Asp Lys Glu	
1	5	10	15
Asn Ala Leu Asp Arg Ala Glu Gln Ala	Glu Ala Asp Lys	Lys Ala Ala	
20	25	30	
Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp	Ile Val Gln Leu Glu Lys		
35	40	45	
Gln Leu Arg Val Thr Glu Asp Ser Arg Asp	Gln Val Leu Glu Glu Leu		
50	55	60	
His Lys Ser Glu Asp Ser Leu Leu Ser Ala	Glu Glu Asn Ala Ala Lys		
65	70	75 80	
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg	Arg Ile Gln Leu Val Glu		
85	90	95	
Glu Glu Leu Asp Arg Ala Gln Glu Arg	Leu Ala Thr Ala	Leu Gln Lys	
100	105	110	
Leu Glu Glu Ala Glu Lys Ala Ala Asp	Glu Ser Glu Arg Gly Met Lys		
115	120	125	
Val Ile Glu Asn Arg Ala Gln Lys Asp	Glu Glu Lys Met Glu Ile Gln		

## 8471-010 b.txt

130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg		
145	150	155
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Leu Glu Gly Asp Leu		
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu		
180	185	190
Leu Glu Glu Glu Leu Lys Leu Val Thr Asn Glu Ala Lys Ser Leu Glu		
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu		
210	215	220
Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu		
225	230	235
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu		
245	250	255
Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln		
260	265	270
Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met		
275	280	

&lt;210&gt; 42

&lt;211&gt; 248

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 42

Met Ala Gly Ile Ser Ser Ile Asp Ala Val Lys Lys Lys Ile Gln Ser		
1	5	10
Leu Gln Gln Val Ala Asp Glu Ala Glu Glu Arg Ala Glu His Leu Gln		
20	25	30
Arg Glu Ala Asp Ala Glu Arg Gln Ala Arg Glu Arg Ala Glu Ala Glu		
35	40	45
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp		
50	55	60
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala		
65	70	75
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn		
85	90	95
Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln Glu Met Gln Leu		
100	105	110
Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu		
115	120	125
Val Ala Arg Lys Leu Val Val Leu Glu Gly Glu Leu Glu Arg Ser Glu		
130	135	140
Glu Arg Ala Glu Val Ala Glu Ser Arg Val Arg Gln Leu Glu Glu Glu		
145	150	155
Leu Arg Thr Met Asp Gln Ser Leu Lys Ser Leu Ile Ala Ser Glu Glu		
165	170	175
Glu Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Leu Leu		
180	185	190
Gly Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg		
195	200	205
Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu Glu Glu Ser Leu		

## 8471-010 b.txt

210	215	220
Ala Ser Ala Lys Glu Glu Asn Val Gly Ile His Gln Val Leu Asp Gln		
225	230	235
Thr Leu Leu Glu Leu Asn Asn Leu		
	245	

<210> 43  
<211> 284  
<212> PRT  
<213> Homo sapiens

<400> 43

Met Glu Ala Ile Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu			
1	5	10	15
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Glu Gln Lys Gln Ala			
20	25	30	
Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Ala Ala Met Gln Lys			
35	40	45	
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu			
50	55	60	
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Ala Asp			
65	70	75	80
Ala Glu Ala Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu			
85	90	95	
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys			
100	105	110	
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys			
115	120	125	
Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln			
130	135	140	
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg			
145	150	155	160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu			
165	170	175	
Glu Arg Thr Glu Glu Arg Ala Glu Leu Ala Glu Ser Lys Cys Ser Glu			
180	185	190	
Leu Glu Glu Leu Lys Asn Val Thr Asn Asn Leu Lys Ser Leu Glu			
195	200	205	
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu			
210	215	220	
Ile Lys Ile Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu			
225	230	235	240
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu			
245	250	255	
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu			
260	265	270	
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile			
275	280		

<210> 44  
<211> 245  
<212> PRT  
<213> Gallus gallus

## 8471-010 b.txt

&lt;400&gt; 44

Met Ala Ala Leu Ser Ser Leu Glu Ala Val Arg Lys Lys Ile Arg Ser  
 1 5 10 15  
 Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Lys Leu Gln  
 20 25 30  
 Arg Glu Val Asp Gln Glu Arg Ala Leu Arg Glu Glu Ala Glu Ser Glu  
 35 40 45  
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
 50 55 60  
 Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
 65 70 75 80  
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn  
 85 90 95  
 Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
 100 105 110  
 Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu  
 115 120 125  
 Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu Glu Arg Ala Glu  
 130 135 140  
 Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu Leu Glu Glu Glu  
 145 150 155 160  
 Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu  
 165 170 175  
 Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
 180 185 190  
 Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
 195 200 205  
 Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Gln Leu  
 210 215 220  
 Tyr Gln Gln Leu Glu Gln Asn Ser Arg Leu Thr Asn Glu Leu Lys Leu  
 225 230 235 240  
 Ala Leu Asn Glu Asp  
 245

&lt;210&gt; 45

&lt;211&gt; 281

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 45

Met Asp Ala Ile Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95

## 8471-010 b.txt

Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
     100                105                110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
     115                120                125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
     130                135                140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
     145                150                155                160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
     165                170                175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
     180                185                190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
     195                200                205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
     210                215                220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
     225                230                235                240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
     245                250                255  
 Glu Asp Gln Leu Tyr Gln Gln Leu Glu Gln Asn Ser Arg Leu Thr Asn  
     260                265                270  
 Glu Leu Lys Leu Ala Leu Asn Glu Asp  
     275                280

&lt;210&gt; 46

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Brachydanio rerio

&lt;400&gt; 46

Met Asp Ala Ile Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
     1                5                10                15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Thr Asp Lys Lys Ala Ala  
     20                25                30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Asp Leu Val Ala Leu Gln Lys  
     35                40                45  
 Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
     50                55                60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
     65                70                75                80  
 Ala Glu Gly Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
     85                90                95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
     100               105               110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
     115               120               125  
 Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln  
     130               135               140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
     145               150               155                160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Val Glu Gly Glu Leu  
     165               170               175

## 8471-010 b.txt

Glu Arg Thr Glu Glu Arg Ala Glu Leu Asn Glu Gly Lys Cys Ser Glu  
     180                 185                 190  
 Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Met Lys Ser Leu Glu  
     195                 200                 205  
 Ala Gln Ala Glu Lys Tyr Ser Ala Lys Glu Asp Lys Tyr Glu Glu Glu  
     210                 215                 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
     225                 230                 235                 240  
 Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
     245                 250                 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
     260                 265                 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
     275                 280

&lt;210&gt; 47

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Coturnix coturnix japonica

&lt;400&gt; 47

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
     1                 5                 10                 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
     20                 25                 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
     35                 40                 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
     50                 55                 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
     65                 70                 75                 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
     85                 90                 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
     100                105                110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
     115                120                125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
     130                135                140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
     145                150                155                160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
     165                170                175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
     180                185                190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
     195                200                205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
     210                215                220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
     225                230                235                240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
     245                250                255

## 8471-010 b.txt

Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 48  
<211> 284  
<212> PRT  
<213> Mus musculus

<400> 48  
Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
 130 135 140  
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg  
 145 150 155 160  
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu  
 165 170 175  
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu  
 180 185 190  
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

<210> 49  
<211> 284  
<212> PRT  
<213> Rana temporaria

## 8471-010 b.txt

&lt;400&gt; 49

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gly Ala  
 20 25 30  
 Glu Asp Lys Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Met Gln Lys  
 35 40 45  
 Lys Met Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Leu Lys Asp Glu Glu Lys Ile Glu Leu Gln  
 130 135 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
 165 170 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
 180 185 190  
 Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Leu Tyr Ala Gln Lys Leu Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp His Ala Leu Asn Asp Met Thr Ser Ile  
 275 280

&lt;210&gt; 50

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;400&gt; 50

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp

## 8471-010 b.txt

65	70	75	80												
Ala	Glu	Ala	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
		85						90							95
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys
		100						105							110
Leu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
		115						120							125
Val	Ile	Glu	Ser	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile	Gln
		130						135							140
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Asp	Ala	Asp	Arg
		145						150							160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Ser	Asp	Leu
		165						170							175
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Gly	Lys	Cys	Ala	Glu
		180						185							190
Leu	Glu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
		195						200							205
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu
		210						215							220
Ile	Lys	Val	Leu	Ser	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu
		225						230							240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp	Leu
		245						250							255
Glu	Asp	Glu	Leu	Tyr	Ala	Gln	Lys	Leu	Lys	Tyr	Lys	Ala	Ile	Ser	Glu
		260						265							270
Glu	Leu	Asp	His	Ala	Leu	Lys	Asp	Met	Thr	Ser	Ile				
		275						280							

&lt;210&gt; 51

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Xenopus laevis

&lt;400&gt; 51

Met	Asp	Ala	Ile	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1				5				10						15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gly	Ala
								20						30	
Glu	Asp	Lys	Ser	Lys	Gln	Leu	Glu	Asp	Glu	Leu	Val	Ala	Leu	Gln	Lys
								35						45	
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Leu	Asp	Lys	Tyr	Ser	Glu	Ala	Leu
								50						60	
Lys	Asp	Ala	Gln	Glu	Lys	Leu	Glu	Leu	Ser	Asp	Lys	Lys	Ala	Thr	Asp
								65						80	
Ala	Glu	Gly	Asp	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu
								85						95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ser	Thr	Ala	Leu	Gln	Lys
								100						110	
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys
								115						125	
Val	Ile	Glu	Asn	Arg	Ala	Leu	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln
								130						140	
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg

## 8471-010 b.txt

145	150	155	160
Lys	Tyr	Glu	Glu
Val	Ala	Arg	Lys
Leu	Val	Ile	Ile
		Glu	Gly
		Asp	Leu
165	170	175	
Glu	Arg	Ala	Glu
Glu	Glu	Arg	Ala
Glu	Leu	Ser	Glu
Ser	Lys	Cys	Ala
180	185	190	Glu
Leu	Glu	Glu	Leu
Lys	Thr	Val	Thr
Asn	Asn	Leu	Lys
		Ser	Leu
195	200	205	Glu
Ala	Gln	Ala	Glu
Lys	Tyr	Ser	Gln
		Lys	Glu
210	215	220	Asp
Ile	Lys	Val	Leu
Thr	Asp	Lys	Leu
Lys	Glu	Ala	Glu
225	230	235	Thr
Phe	Ala	Glu	Arg
Thr	Val	Ala	Lys
Leu	Glu	Lys	Ser
245	250	255	Ile
Glu	Asp	Glu	Asp
Leu	Tyr	Ala	Gln
Lys	Leu	Lys	Tyr
		Lys	Ala
260	265	270	Ile
Glu	Leu	Asp	Ser
His	Ala	Leu	Glu
Asn	Asp	Met	Thr
			Ser
275	280		Ile

<210> 52  
<211> 284  
<212> PRT  
<213> Gallus gallus

<400>	52															
Met	Glu	Ala	Ile	Lys	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu	
1				5			10				15					
Asn	Ala	Ile	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Gln	Ala	
				20			25				30					
Glu	Asp	Arg	Cys	Lys	Gln	Leu	Glu	Glu	Glu	Gln	Gln	Gly	Leu	Gln	Lys	
				35			40				45					
Lys	Leu	Lys	Gly	Thr	Glu	Asp	Glu	Val	Glu	Lys	Tyr	Ser	Glu	Ser	Val	
				50			55				60					
Lys	Glu	Ala	Gln	Glu	Lys	Leu	Glu	Gln	Ala	Glu	Lys	Lys	Ala	Thr	Asp	
				65			70				75				80	
Ala	Glu	Ala	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val	Glu	
						85				90				95		
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln	Lys	
						100				105				110		
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met	Lys	
						115				120				125		
Val	Ile	Glu	Asn	Arg	Ala	Met	Lys	Asp	Glu	Glu	Lys	Met	Glu	Leu	Gln	
						130				135				140		
Glu	Met	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp	Arg	
						145				150				155		
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Val	Leu	Glu	Gly	Glu	Leu	
							165				170				175	
Glu	Arg	Ser	Glu	Glu	Arg	Ala	Glu	Val	Ala	Glu	Ser	Lys	Cys	Gly	Asp	
							180				185				190	
Leu	Glu	Glu	Glu	Leu	Lys	Ile	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu	
						195				200				205		
Ala	Gln	Ala	Asp	Lys	Tyr	Ser	Thr	Lys	Glu	Asp	Lys	Tyr	Glu	Glu	Glu	
						210				215				220		
Ile	Lys	Leu	Leu	Gly	Glu	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala	Glu	

## 8471-010 b.txt

225	230	235	240
Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu			
245	250	255	
Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu			
260	265	270	
Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu			
275	280		

)  
 -  
 <210> 53  
 <211> 284  
 <212> PRT  
 <213> Homo sapiens

<400> 53  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1               5               10               15  
 Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala  
 20              25              30  
 Glu Asp Arg Cys Lys Gln Leu Glu Glu Gln Gln Ala Leu Gln Lys  
 35              40              45  
 Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val  
 50              55              60  
 Lys Glu Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp  
 65              70              75              80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85              90              95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100             105             110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115             120             125  
 Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln  
 130             135             140  
 Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ser Asp Arg  
 145             150             155             160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Leu Glu Gly Glu Leu  
 165             170             175  
 Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Lys Cys Gly Asp  
 180             185             190  
 Leu Glu Glu Leu Lys Ile Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195             200             205  
 Ala Gln Ala Asp Lys Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu  
 210             215             220  
 Ile Lys Leu Leu Glu Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225             230             235             240  
 Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
 245             250             255  
 Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu  
 260             265             270  
 Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu  
 275             280

<210> 54

## 8471-010 b.txt

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 54

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Ile Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Gln Ala  
 20 25 30  
 Glu Asp Arg Cys Lys Gln Leu Glu Glu Glu Gln Gln Ala Leu Gln Lys  
 35 40 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Val Glu Lys Tyr Ser Glu Ser Val  
 50 55 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Gln Ala Glu Lys Lys Ala Thr Asp  
 65 70 75 80  
 Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85 90 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100 105 110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
 115 120 125  
 Val Ile Glu Asn Arg Ala Met Lys Asp Glu Glu Lys Met Glu Leu Gln  
 130 135 140  
 Glu Met Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ser Asp Arg  
 145 150 155 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Leu Glu Gly Glu Leu  
 165 170 175  
 Glu Arg Ser Glu Glu Arg Ala Glu Val Ala Glu Ser Lys Cys Gly Asp  
 180 185 190  
 Leu Glu Glu Glu Leu Lys Ile Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Asp Lys Tyr Ser Thr Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Leu Leu Glu Glu Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Ala Lys Leu Glu Lys Thr Ile Asp Asp Leu  
 245 250 255  
 Glu Asp Glu Val Tyr Ala Gln Lys Met Lys Tyr Lys Ala Ile Ser Glu  
 260 265 270  
 Glu Leu Asp Asn Ala Leu Asn Asp Ile Thr Ser Leu  
 275 280

&lt;210&gt; 55

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Sus scrofa

&lt;400&gt; 55

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1 5 10 15  
 Asn Ala Leu Asp Arg Ala Asp Glu Ala Glu Ala Asp Lys Lys Ala Ala  
 20 25 30  
 Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys

## 8471-010 b.txt

35	40	45
Lys Leu Lys Ala Thr Glu Asp Glu	Leu Asp Lys Tyr Ser Glu Ala	Leu
50	55	60
Lys Asp Ala Gln Glu Lys Leu Glu	Leu Ala Glu Lys Lys Ala Thr	Asp
65	70	75
80		
Ala Glu Ala Asp Val Ala Ser Leu	Asn Arg Arg Ile Gln Leu Phe	Glu
85	90	95
Glu Glu Leu Asp Arg Ala Gln Glu	Arg Leu Ala Thr Ala Leu Gln	Lys
100	105	110
Leu Glu Ala Glu Lys Ala Ala Asp	Glu Ser Glu Arg Gly Met Lys	
115	120	125
Val Ile Glu Ser Arg Ala Gln Lys	Asp Glu Glu Lys Met Glu Ile Gln	
130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys	His Ile Ala Glu Asp Ala Asp	Arg
145	150	155
160		
Lys Tyr Glu Glu Val Ala Arg Lys	Leu Val Ile Ile Glu Ser Asp	Leu
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu	Leu Ser Glu Gly Lys Cys Ala	Glu
180	185	190
Leu Glu Glu Glu Leu Lys Thr Val	Thr Asn Asn Leu Lys Ser Leu	Glu
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln	Lys Glu Asp Lys Tyr Glu Glu	Glu
210	215	220
Ile Lys Val Leu Ser Asp Lys	Leu Lys Glu Ala Glu Thr Arg Ala	Glu
225	230	235
240		
Phe Ala Glu Arg Ser Val Thr Lys	Leu Glu Lys Ser Ile Asp Asp	Leu
245	250	255
Glu Asp Glu Leu Tyr Ala Gln Lys	Leu Lys Tyr Lys Ala Ile Ser	Glu
260	265	270
Glu Leu Asp His Ala Leu Asn Asp	Met Thr Ser Ile	
275	280	

<210> 56  
 <211> 284  
 <212> PRT  
 <213> Gallus gallus

<400> 56  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
 1           5           10           15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
 20           25           30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
 35           40           45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
 50           55           60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
 65           70           75           80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
 85           90           95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
 100          105         110

## 8471-010 b.txt

Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
     115                 120                 125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
     130                 135                 140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
     145                 150                 155                 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
     165                 170                 175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Gln Val Arg Gln  
     180                 185                 190  
 Leu Glu Glu Gln Leu Arg Ile Met Asp Gln Thr Leu Lys Ala Leu Met  
     195                 200                 205  
 Ala Ala Glu Asp Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
     210                 215                 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
     225                 230                 235                 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
     245                 250                 255  
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln  
     260                 265                 270  
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met  
     275                 280

<210> 57  
 <211> 284  
 <212> PRT  
 <213> Coturnix coturnix japonica

<400> 57  
 Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu  
     1                  5                 10                 15  
 Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala  
     20                 25                 30  
 Glu Glu Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ala Leu Gln Lys  
     35                 40                 45  
 Lys Leu Lys Gly Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ser Leu  
     50                 55                 60  
 Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Asp Lys Lys Ala Thr Asp  
     65                 70                 75                 80  
 Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu  
     85                 90                 95  
 Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys  
     100                105               110  
 Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys  
     115                120               125  
 Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln  
     130                135               140  
 Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg  
     145                150               155                 160  
 Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu  
     165                170               175  
 Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu  
     180                185               190

## 8471-010 b.txt

Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu  
 195 200 205  
 Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu  
 210 215 220  
 Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu  
 225 230 235 240  
 Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu  
 245 250 255  
 Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln  
 260 265 270  
 Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met  
 275 280

<210> 58  
 <211> 248  
 <212> PRT  
 <213> Xenopus laevis

<400> 58  
 Met Ala Gly Ile Thr Ser Leu Glu Ala Val Lys Arg Lys Ile Lys Cys  
 1 5 10 15  
 Leu Gln Asp Gln Ala Asp Glu Ala Glu Glu Arg Ala Glu Lys Leu Gln  
 20 25 30  
 Arg Glu Arg Asp Met Glu Arg Lys Leu Arg Glu Ala Ala Glu Gly Asp  
 35 40 45  
 Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
 50 55 60  
 Arg Ala Gln Glu Arg Leu Ser Thr Ala Leu Gln Lys Leu Glu Glu Ala  
 65 70 75 80  
 Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Asn  
 85 90 95  
 Arg Ala Leu Lys Asp Glu Glu Lys Met Glu Leu Gln Glu Ile Gln Leu  
 100 105 110  
 Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg Lys Tyr Glu Glu  
 115 120 125  
 Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu Glu Arg Ala Glu  
 130 135 140  
 Glu Arg Ala Glu Leu Ser Glu Ser His Tyr Arg Gln Leu Glu Asp Gln  
 145 150 155 160  
 Gln Arg Ile Met Asp Gln Thr Leu Lys Thr Leu Ile Ala Ser Glu Glu  
 165 170 175  
 Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
 180 185 190  
 Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
 195 200 205  
 Thr Val Ala Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Glu Lys Val  
 210 215 220  
 Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln Met Leu Asp Gln  
 225 230 235 240  
 Thr Leu Leu Glu Leu Asn Asn Met  
 245

<210> 59

## 8471-010 b.txt

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Gallus gallus

&lt;400&gt; 59

Met	Asp	Ala	Ile	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5				10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala
				20				25					30	
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Asp	Ile	Val	Gln	Leu	Glu
				35				40					45	
Gln	Leu	Arg	Val	Thr	Glu	Asp	Ser	Arg	Asp	Gln	Val	Leu	Glu	Glu
				50				55					60	
His	Lys	Ser	Glu	Asp	Ser	Leu	Leu	Phe	Ala	Glu	Glu	Asn	Ala	Lys
65						70				75			80	
Ala	Glu	Ser	Glu	Val	Ala	Ser	Leu	Asn	Arg	Arg	Ile	Gln	Leu	Val
						85			90				95	
Glu	Glu	Leu	Asp	Arg	Ala	Gln	Glu	Arg	Leu	Ala	Thr	Ala	Leu	Gln
						100			105				110	
Leu	Glu	Glu	Ala	Glu	Lys	Ala	Ala	Asp	Glu	Ser	Glu	Arg	Gly	Met
						115			120				125	
Val	Ile	Glu	Asn	Arg	Ala	Gln	Lys	Asp	Glu	Glu	Lys	Met	Glu	Ile
						130			135				140	
Glu	Ile	Gln	Leu	Lys	Glu	Ala	Lys	His	Ile	Ala	Glu	Glu	Ala	Asp
145						150					155			160
Lys	Tyr	Glu	Glu	Val	Ala	Arg	Lys	Leu	Val	Ile	Ile	Glu	Gly	Asp
						165			170				175	
Glu	Arg	Ala	Glu	Glu	Arg	Ala	Glu	Leu	Ser	Glu	Ser	Lys	Cys	Ala
						180			185				190	
Leu	Glu	Glu	Leu	Lys	Thr	Val	Thr	Asn	Asn	Leu	Lys	Ser	Leu	Glu
						195			200				205	
Ala	Gln	Ala	Glu	Lys	Tyr	Ser	Gln	Lys	Glu	Asp	Lys	Tyr	Glu	Glu
						210			215				220	
Ile	Lys	Val	Leu	Thr	Asp	Lys	Leu	Lys	Glu	Ala	Glu	Thr	Arg	Ala
225						230					235			240
Phe	Ala	Glu	Arg	Ser	Val	Thr	Lys	Leu	Glu	Lys	Ser	Ile	Asp	Asp
						245			250				255	
Glu	Glu	Lys	Val	Ala	His	Ala	Lys	Glu	Glu	Asn	Leu	Asn	Met	His
						260			265				270	
Met	Leu	Asp	Gln	Thr	Leu	Leu	Glu	Leu	Asn	Asn	Met			
						275			280					

&lt;210&gt; 60

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Coturnix coturnix japonica

&lt;400&gt; 60

Met	Asp	Ala	Ile	Lys	Lys	Met	Gln	Met	Leu	Lys	Leu	Asp	Lys	Glu
1				5				10					15	
Asn	Ala	Leu	Asp	Arg	Ala	Glu	Gln	Ala	Glu	Ala	Asp	Lys	Lys	Ala
				20				25					30	
Glu	Glu	Arg	Ser	Lys	Gln	Leu	Glu	Asp	Asp	Ile	Val	Gln	Leu	Glu
														lys

## 8471-010 b.txt

35	40	45
Gln Leu Arg Val Thr Glu Asp Ser Arg Asp Gln Val	Leu Glu Glu Leu	
50	55	60
His Lys Ser Glu Asp Ser Leu Leu Ser Ala Glu Glu Ile Ala Ala Lys		
65	70	75
Ala Glu Ser Glu Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu		
85	90	95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys		
100	105	110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys		
115	120	125
Val Ile Glu Asn Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln		
130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Glu Ala Asp Arg		
145	150	155
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Gly Asp Leu		
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Ser Lys Cys Ala Glu		
180	185	190
Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu		
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu		
210	215	220
Ile Lys Val Leu Thr Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu		
225	230	235
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu		
245	250	255
Glu Glu Lys Val Ala His Ala Lys Glu Glu Asn Leu Asn Met His Gln		
260	265	270
Met Leu Asp Gln Thr Leu Leu Glu Leu Asn Asn Met		
275	280	

&lt;210&gt; 61

&lt;211&gt; 227

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 61

Cys Arg Leu Arg Ile Phe Leu Arg Thr Ala Ser Ser Glu His Leu His		
1	5	10
Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp Val Ala Ser Leu Asn		
20	25	30
Arg Arg Ile Gln Leu Val Glu Glu Leu Asp Arg Ala Gln Glu Arg		
35	40	45
Leu Ala Thr Val Leu Gln Lys Leu Glu Glu Ala Glu Lys Ala Ala Asp		
50	55	60
Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser Arg Ala Gln Lys Asp		
65	70	75
Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu Lys Glu Ala Lys His		
85	90	95
Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu Val Ala Arg Lys Leu		
100	105	110
Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu Glu Arg Ala Glu Leu		

## 8471-010 b.txt

115	120	125
Ser Glu Gly Gln Val Arg Gln	Leu Glu Glu Gln	Leu Arg Ile Met Asp
130	135	140
Ser Asp Leu Glu Ser Ile Asn Ala Ala	Glu Asp Lys Tyr Ser Gln Lys	
145	150	155
Glu Asp Arg Tyr Glu Glu Ile Lys Val	Leu Ser Asp Lys Leu Lys	160
165	170	175
Glu Ala Glu Thr Arg Ala Glu Phe Ala	Glu Arg Ser Val Thr Lys Leu	
180	185	190
Glu Lys Ser Ile Asp Asp Leu Glu Glu Lys Val	Ala His Ala Lys Glu	
195	200	205
Glu Asn Leu Ser Met His Gln Met Leu Asp Gln	Thr Leu Leu Glu Leu	
210	215	220
Asn Asn Met		
225		

<210> 62  
<211> 284  
<212> PRT  
<213> Rattus norvegicus

<400> 62		
Met Asp Ala Ile Lys Lys Lys Met Gln	Met Leu Lys Leu Asp Lys Glu	
1	5	10
Asn Ala Leu Asp Arg Ala Glu Gln	Ala Glu Asp Lys Lys Ala Ala	
20	25	30
Glu Asp Arg Ser Lys Gln Leu Glu Glu Asp	Ile Ser Ala Lys Glu Lys	
35	40	45
Leu Leu Arg Ala Ser Glu Asp Glu Arg Asp Arg	Val Leu Glu Glu Leu	
50	55	60
His Lys Ala Glu Asp Ser Leu Leu Ala Ala	Asp Glu Thr Ala Ala Lys	
65	70	75
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg	Ile Gln Leu Val Glu	
85	90	95
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala	Thr Ala Leu Gln Lys	
100	105	110
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser	Glu Arg Gly Met Lys	
115	120	125
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu	Lys Met Glu Ile Gln	
130	135	140
Glu Ile Gln Leu Lys Glu Ala Lys His Ile	Ala Glu Asp Ala Asp Arg	
145	150	155
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val	Ile Ile Glu Ser Asp Leu	
165	170	175
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser	Glu Gly Lys Cys Ala Glu	
180	185	190
Leu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu	Lys Ser Leu Glu	
195	200	205
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp	Lys Tyr Glu Glu Glu	
210	215	220
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala	Glu Thr Arg Ala Glu	
225	230	235
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys	Ser Ile Asp Asp Leu	

## 8471-010 b.txt

245	250	255
Glu Glu Lys Val Ala His Ala Lys	Glu Glu Asn Leu Ser Met His Gln	
260	265	270
Met Leu His Gln Thr Leu Leu Glu	Leu Asn Asn Met	
275	280	

<210> 63  
<211> 281  
<212> PRT  
<213> Rattus norvegicus

<400> 63

Met Asp Ala Ile Lys Lys Lys Met Gln Met Leu Lys Leu Asp Lys Glu			
1	5	10	15
Asn Ala Leu Asp Arg Ala Glu Gln Ala Glu Ala Asp Lys Lys Ala Ala			
20	25	30	
Glu Asp Arg Ser Lys Gln Leu Glu Asp Glu Leu Val Ser Leu Gln Lys			
35	40	45	
Lys Leu Lys Ala Thr Glu Asp Glu Leu Asp Lys Tyr Ser Glu Ala Leu			
50	55	60	
Lys Asp Ala Gln Glu Lys Leu Glu Leu Ala Glu Lys Lys Ala Thr Asp			
65	70	75	80
Ala Glu Ala Asp Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu			
85	90	95	
Glu Glu Leu Asp Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys			
100	105	110	
Leu Glu Glu Ala Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys			
115	120	125	
Val Ile Glu Ser Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln			
130	135	140	
Glu Ile Gln Leu Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg			
145	150	155	160
Lys Tyr Glu Glu Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu			
165	170	175	
Glu Arg Ala Glu Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu			
180	185	190	
Leu Glu Glu Glu Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu			
195	200	205	
Ala Gln Ala Glu Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu			
210	215	220	
Ile Lys Val Leu Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu			
225	230	235	240
Phe Ala Glu Arg Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu			
245	250	255	
Glu Asp Gln Leu Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn			
260	265	270	
Glu Leu Lys Leu Ala Leu Asn Glu Asp			
275	280		

<210> 64  
<211> 251  
<212> PRT  
<213> Rattus norvegicus

## 8471-010 b.txt

<400> 64  
Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser  
1 5 10 15  
Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln  
20 25 30  
Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp  
35 40 45  
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
50 55 60  
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
65 70 75 80  
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser  
85 90 95  
Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
100 105 110  
Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu  
115 120 125  
Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu  
130 135 140  
Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu Leu Glu Glu Glu  
145 150 155 160  
Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu  
165 170 175  
Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
180 185 190  
Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
195 200 205  
Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Lys Phe  
210 215 220  
Leu Cys Phe Ser Pro Pro Lys Thr Pro Ser Ser Ser Arg Met Ser His  
225 230 235 240  
Leu Ser Glu Leu Cys Ile Cys Leu Leu Ser Ser  
245 250

<210> 65  
<211> 245  
<212> PRT  
<213> Rattus norvegicus

<400> 65  
Met Ala Gly Ser Ser Ser Leu Glu Ala Val Arg Arg Lys Ile Arg Ser  
1 5 10 15  
Leu Gln Glu Gln Ala Asp Ala Ala Glu Glu Arg Ala Gly Ser Leu Gln  
20 25 30  
Arg Glu Leu Asp Gln Glu Arg Lys Leu Arg Glu Thr Ala Glu Ala Asp  
35 40 45  
Val Ala Ser Leu Asn Arg Arg Ile Gln Leu Val Glu Glu Glu Leu Asp  
50 55 60  
Arg Ala Gln Glu Arg Leu Ala Thr Ala Leu Gln Lys Leu Glu Glu Ala  
65 70 75 80  
Glu Lys Ala Ala Asp Glu Ser Glu Arg Gly Met Lys Val Ile Glu Ser  
85 90 95

## 8471-010 b.txt

Arg Ala Gln Lys Asp Glu Glu Lys Met Glu Ile Gln Glu Ile Gln Leu  
     100                 105                 110  
 Lys Glu Ala Lys His Ile Ala Glu Asp Ala Asp Arg Lys Tyr Glu Glu  
     115                 120                 125  
 Val Ala Arg Lys Leu Val Ile Ile Glu Ser Asp Leu Glu Arg Ala Glu  
     130                 135                 140  
 Glu Arg Ala Glu Leu Ser Glu Gly Lys Cys Ala Glu Leu Glu Glu Glu  
     145                 150                 155                 160  
 Leu Lys Thr Val Thr Asn Asn Leu Lys Ser Leu Glu Ala Gln Ala Glu  
     165                 170                 175  
 Lys Tyr Ser Gln Lys Glu Asp Lys Tyr Glu Glu Glu Ile Lys Val Leu  
     180                 185                 190  
 Ser Asp Lys Leu Lys Glu Ala Glu Thr Arg Ala Glu Phe Ala Glu Arg  
     195                 200                 205  
 Ser Val Thr Lys Leu Glu Lys Ser Ile Asp Asp Leu Glu Asp Gln Leu  
     210                 215                 220  
 Tyr His Gln Leu Glu Gln Asn Arg Arg Leu Thr Asn Glu Leu Lys Leu  
     225                 230                 235                 240  
 Ala Leu Asn Glu Asp  
     245

&lt;210&gt; 66

&lt;211&gt; 961

&lt;212&gt; PRT

&lt;213&gt; Bos taurus

&lt;400&gt; 66

Met Asn Phe Leu Arg Gly Val Met Gly Gly Gln Ser Ala Gly Pro Gln  
     1                 5                 10                 15  
 His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser  
     20                 25                 30  
 Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala Leu Lys Ser  
     35                 40                 45  
 Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala Met Glu His  
     50                 55                 60  
 Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile Ile Gly  
     65                 70                 75                 80  
 Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu Glu  
     85                 90                 95  
 Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu Gly Ser Gln  
     100                105                110  
 Phe Thr Glu Ile Phe Ile Lys Gln Gln Glu Asn Val Thr Leu Leu Leu  
     115                120                125  
 Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro Gly Val Lys  
     130                135                140  
 Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Gln Val Gln Gln Ile  
     145                150                155                 160  
 Ile Leu Val Ser Pro Met Gly Val Ser Arg Leu Met Asp Leu Leu Ala  
     165                170                175  
 Asp Ser Arg Glu Val Ile Arg Asn Asp Gly Val Leu Leu Leu Gln Ala  
     180                185                190  
 Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala Phe Glu Asn  
     195                200                205

## 8471-010 b.txt

Ala Phe Glu Arg Leu Leu Asp Ile Ile Thr Glu Glu Gly Asn Ser Asp  
 210 215 220  
 Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Leu Gln Asn Leu Leu  
 225 230 235 240  
 Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly Ser Tyr Ile  
 245 250 255  
 Gln Arg Met Lys Pro Trp Phe Glu Val Gly Asp Glu Asn Ser Gly Trp  
 260 265 270  
 Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln Leu Val Arg  
 275 280 285  
 Val Leu Val Ser Pro Asn Asn Pro Pro Gly Ala Thr Ser Ser Cys Gln  
 290 295 300  
 Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys Thr Ile Leu  
 305 310 315 320  
 Met Ala Thr Gly Val Pro Ala Asp Ile Leu Thr Glu Thr Ile Asn Thr  
 325 330 335  
 Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp Tyr Phe Ala  
 340 345 350  
 Ser Val Asn Ala Pro Ser Asn Pro Pro Arg Pro Ala Ile Val Val Leu  
 355 360 365  
 Leu Met Ser Met Val Asn Glu Arg Gln Pro Phe Val Leu Arg Cys Ala  
 370 375 380  
 Val Leu Tyr Cys Phe Gln Cys Phe Leu Tyr Lys Asn Gln Lys Gly Gln  
 385 390 395 400  
 Gly Glu Ile Val Ser Thr Leu Leu Pro Ser Thr Ile Asp Ala Thr Gly  
 405 410 415  
 Asn Thr Val Ser Ala Gly Gln Leu Leu Cys Gly Gly Leu Phe Ser Thr  
 420 425 430  
 Asp Ser Leu Ser Asn Trp Cys Ala Ala Val Ala Leu Ala His Ala Leu  
 435 440 445  
 Gln Glu Asn Ala Thr Gln Lys Glu Gln Leu Leu Arg Val Gln Leu Ala  
 450 455 460  
 Thr Ser Ile Gly Asn Pro Pro Val Ser Leu Leu Gln Gln Cys Thr Asn  
 465 470 475 480  
 Ile Leu Ser Gln Gly Ser Lys Ile Gln Thr Arg Val Gly Leu Leu Met  
 485 490 495  
 Leu Leu Cys Thr Trp Leu Ser Asn Cys Pro Ile Ala Val Thr His Phe  
 500 505 510  
 Leu His Asn Ser Ala Asn Val Pro Phe Leu Thr Gly Gln Ile Ala Glu  
 515 520 525  
 Asn Leu Gly Glu Glu Gln Leu Val Gln Gly Leu Cys Ala Leu Leu  
 530 535 540  
 Leu Gly Ile Ser Ile Tyr Phe Asn Asp Asn Ser Leu Glu Thr Tyr Met  
 545 550 555 560  
 Lys Glu Lys Leu Lys Gln Leu Ile Glu Lys Arg Ile Gly Lys Glu Asn  
 565 570 575  
 Phe Ile Glu Lys Leu Gly Phe Ile Ser Lys His Glu Leu Tyr Ser Arg  
 580 585 590  
 Ala Ser Gln Lys Pro Gln Pro Asn Phe Pro Ser Pro Glu Tyr Met Ile  
 595 600 605  
 Phe Asp His Glu Phe Thr Lys Leu Val Lys Glu Leu Glu Gly Val Ile  
 610 615 620  
 Thr Lys Ala Ile Tyr Lys Ser Ser Glu Glu Asp Lys Lys Glu Glu Glu

## 8471-010 b.txt

625	630	635	640
Val Lys Lys Thr Leu Glu Gln His Asp Ser Ile Val Thr His Tyr Lys			
645	650	655	655
Asn Met Ile Arg Glu Gln Asp Leu Gln Leu Glu Glu Leu Lys Gln Gln			
660	665	670	
Ile Ser Thr Leu Lys Cys Gln Asn Glu Gln Leu Gln Thr Ala Val Thr			
675	680	685	
Gln Gln Val Ser Gln Ile Gln Gln His Lys Asp Gln Tyr Asn Leu Leu			
690	695	700	
Lys Val Gln Leu Gly Lys Asp Ser Gln His Gln Gly Pro Tyr Thr Asp			
705	710	715	720
Gly Ala Gln Met Asn Gly Val Gln Pro Glu Glu Ile Ser Arg Leu Arg			
725	730	735	
Glu Glu Ile Glu Glu Leu Lys Ser Asn Arg Glu Leu Leu Gln Ser Gln			
740	745	750	
Leu Ala Glu Lys Asp Ser Leu Ile Glu Asn Leu Lys Ser Ser Gln Leu			
755	760	765	
Ser Pro Gly Thr Asn Glu Gln Ser Ser Ala Thr Ala Gly Asp Ser Glu			
770	775	780	
Gln Ile Ala Glu Leu Lys Gln Glu Leu Ala Thr Leu Lys Ser Gln Leu			
785	790	795	800
Asn Ser Gln Ser Val Glu Ile Thr Lys Leu Gln Thr Glu Lys Gln Glu			
805	810	815	
Leu Leu Gln Lys Thr Glu Ala Phe Ala Lys Ser Ala Pro Val Pro Gly			
820	825	830	
Glu Ser Glu Thr Val Ile Ala Thr Lys Thr Thr Asp Val Glu Gly Arg			
835	840	845	
Leu Ser Ala Leu Leu Gln Glu Thr Lys Glu Leu Lys Asn Glu Ile Lys			
850	855	860	
Ala Leu Ser Glu Glu Arg Thr Ala Ile Lys Glu Gln Leu Asp Ser Ser			
865	870	875	880
Asn Ser Thr Ile Ala Ile Leu Gln Asn Glu Lys Asn Lys Leu Glu Val			
885	890	895	
Asp Ile Thr Asp Ser Lys Lys Glu Gln Asp Asp Leu Leu Val Leu Leu			
900	905	910	
Ala Asp Gln Asp Gln Lys Ile Phe Ser Leu Lys Asn Lys Leu Lys Glu			
915	920	925	
Leu Gly His Pro Val Glu Glu Glu Asp Glu Leu Glu Ser Gly Asp Gln			
930	935	940	
Asp Asp Glu Asp Asp Glu Asp Glu Asp Asp Gly Lys Glu Gln Gly His			
945	950	955	960
Ile			

<210> 67  
<211> 959  
<212> PRT  
<213> Rattus norvegicus

<400> 67  
Met Asn Phe Leu Arg Gly Val Met Gly Gly Gln Ser Ala Gly Pro Gln  
1 5 10 15  
His Thr Glu Ala Glu Thr Ile Gln Lys Leu Cys Asp Arg Val Ala Ser  
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20	25	30
Ser Thr Leu Leu Asp Asp Arg Arg Asn Ala Val Arg Ala	Leu Lys Ser	
35	40	45
Leu Ser Lys Lys Tyr Arg Leu Glu Val Gly Ile Gln Ala	Met Glu His	
50	55	60
Leu Ile His Val Leu Gln Thr Asp Arg Ser Asp Ser Glu Ile	Ile Ala	
65	70	75
Tyr Ala Leu Asp Thr Leu Tyr Asn Ile Ile Ser Asn Asp Glu	Glu Glu	
85	90	95
Glu Val Glu Glu Asn Ser Thr Arg Gln Ser Glu Asp Leu	Gly Ser Gln	
100	105	110
Phe Thr Glu Ile Phe Ile Lys Gln Pro Glu Asn Val Thr	Leu Leu Leu	
115	120	125
Ser Leu Leu Glu Glu Phe Asp Phe His Val Arg Trp Pro	Gly Val Arg	
130	135	140
Leu Leu Thr Ser Leu Leu Lys Gln Leu Gly Pro Pro Val	Gln Gln Ile	
145	150	155
Ile Leu Val Ser Pro Met Gly Val Ser Lys Leu Met Asp	Leu Leu Ala	
165	170	175
Asp Ser Arg Glu Ile Ile Arg Asn Asp Gly Val Leu Leu	Gln Ala	
180	185	190
Leu Thr Arg Ser Asn Gly Ala Ile Gln Lys Ile Val Ala	Phe Glu Asn	
195	200	205
Ala Phe Glu Arg Leu Leu Asp Ile Ile Thr Glu Glu	Gly Asn Ser Asp	
210	215	220
Gly Gly Ile Val Val Glu Asp Cys Leu Ile Leu Gln Asn	Leu Leu	
225	230	235
Lys Asn Asn Asn Ser Asn Gln Asn Phe Phe Lys Glu Gly	Ser Tyr Ile	
245	250	255
Gln Arg Met Lys Ala Trp Phe Glu Val Gly Asp Glu Asn	Pro Gly Trp	
260	265	270
Ser Ala Gln Lys Val Thr Asn Leu His Leu Met Leu Gln	Leu Val Arg	
275	280	285
Val Leu Val Ser Pro Thr Asn Pro Pro Gly Ala Thr	Ser Ser Cys Gln	
290	295	300
Lys Ala Met Phe Gln Cys Gly Leu Leu Gln Gln Leu Cys	Thr Ile Leu	
305	310	315
Met Ala Thr Gly Ile Pro Ala Asp Ile Leu Thr Glu Thr	Ile Asn Thr	
325	330	335
Val Ser Glu Val Ile Arg Gly Cys Gln Val Asn Gln Asp	Tyr Phe Ala	
340	345	350
Ser Val Asn Ala Pro Ser Asn Pro Pro Arg Pro Ala	Ile Val Val Leu	
355	360	365
Leu Met Ser Met Val Asn Glu Arg Gln Pro Phe Val	Leu Arg Cys Ala	
370	375	380
Val Leu Tyr Cys Phe Gln Cys Phe Leu Tyr Lys Asn Glu	Lys Gly Gln	
385	390	395
Gly Glu Ile Val Ala Thr Leu Leu Pro Ser Thr Ile Asp	Ala Thr Gly	
405	410	415
Asn Ser Val Ser Ala Gly Gln Leu Leu Cys Gly Gly	Leu Phe Ser Thr	
420	425	430
Asp Ser Leu Ser Asn Trp Cys Ala Ala Val Ala Leu Ala	His Ala Leu	
435	440	445

## 8471-010 b.txt

Gln Gly Asn Ala Thr Gln Lys Glu Gln Leu Leu Arg Val Gln Leu Ala  
   450                  455                  460  
 Thr Ser Ile Gly Asn Pro Pro Val Ser Leu Leu Gln Gln Cys Thr Asn  
   465                  470                  475                  480  
 Ile Leu Ser Gln Gly Ser Lys Ile Gln Thr Arg Val Gly Leu Leu Met  
   485                  490                  495  
 Leu Leu Cys Thr Trp Leu Ser Asn Cys Pro Ile Ala Val Thr His Phe  
   500                  505                  510  
 Leu His Asn Ser Ala Asn Val Pro Phe Leu Thr Gly Gln Ile Ala Glu  
   515                  520                  525  
 Asn Leu Gly Glu Glu Gln Leu Val Gln Gly Leu Cys Ala Leu Leu  
   530                  535                  540  
 Leu Gly Ile Ser Ile Tyr Phe Asn Asp Asn Ser Leu Glu Asn Tyr Thr  
   545                  550                  555                  560  
 Lys Glu Lys Leu Lys Gln Leu Ile Glu Lys Arg Ile Gly Lys Glu Asn  
   565                  570                  575  
 Tyr Ile Glu Lys Leu Gly Phe Ile Ser Lys His Glu Leu Tyr Ser Arg  
   580                  585                  590  
 Ala Ser Gln Lys Pro Gln Pro Asn Phe Pro Ser Pro Glu Tyr Met Ile  
   595                  600                  605  
 Phe Asp His Glu Phe Thr Lys Leu Val Lys Glu Leu Glu Gly Val Ile  
   610                  615                  620  
 Thr Lys Ala Ile Tyr Lys Ser Ser Glu Glu Asp Lys Lys Glu Glu Glu  
   625                  630                  635                  640  
 Val Lys Lys Thr Leu Glu Gln His Asp Asn Ile Val Thr His Tyr Lys  
   645                  650                  655  
 Asn Met Ile Arg Glu Gln Asp Leu Gln Leu Glu Glu Leu Lys Gln Gln  
   660                  665                  670  
 Val Ser Thr Leu Lys Cys Gln Asn Glu Gln Leu Gln Thr Ala Val Thr  
   675                  680                  685  
 Gln Gln Ala Ser Gln Ile Gln Gln His Lys Asp Gln Tyr Asn Leu Leu  
   690                  695                  700  
 Lys Val Gln Leu Gly Lys Asp Asn His His Gln Gly Ser His Ser Asp  
   705                  710                  715                  720  
 Gly Ala Gln Val Asn Gly Ile Gln Pro Glu Glu Ile Ser Arg Leu Arg  
   725                  730                  735  
 Glu Glu Ile Glu Glu Leu Arg Ser His Gln Val Leu Leu Gln Ser Gln  
   740                  745                  750  
 Leu Ala Glu Lys Asp Thr Val Ile Glu Asn Leu Arg Ser Ser Gln Val  
   755                  760                  765  
 Ser Gly Met Ser Glu Gln Ala Leu Ala Thr Cys Ser Pro Arg Asp Ala  
   770                  775                  780  
 Glu Gln Val Ala Glu Leu Lys Gln Glu Leu Ser Ala Leu Lys Ser Gln  
   785                  790                  795                  800  
 Leu Cys Ser Gln Ser Leu Glu Ile Thr Arg Leu Gln Thr Glu Asn Ser  
   805                  810                  815  
 Glu Leu Gln Gln Arg Ala Glu Thr Leu Ala Lys Ser Val Pro Val Glu  
   820                  825                  830  
 Gly Glu Ser Glu Leu Val Thr Ala Ala Lys Thr Thr Asp Val Glu Gly  
   835                  840                  845  
 Arg Leu Ser Ala Leu Leu Gln Glu Thr Lys Glu Leu Lys Asn Glu Ile  
   850                  855                  860  
 Lys Ala Leu Ser Glu Glu Arg Thr Ala Ile Gln Lys Gln Leu Asp Ser

## 8471-010 b.txt

865	870	875	880
Ser Asn Ser Thr Ile Ala Ile Leu Gln Thr Glu Lys Asp Lys	Leu Tyr		
885	890	895	
Leu Glu Val Thr Asp Ser Lys Lys Glu Gln Asp Asp	Leu Leu Val	Leu	
900	905	910	
Leu Ala Asp Gln Asp Gln Lys Ile Leu Ser Leu Lys Ser	Lys Leu Lys		
915	920	925	
Asp Leu Gly His Pro Val Glu Glu Asp Glu Ser Gly Asp Gln	Glu		
930	935	940	
Asp Asp Asp Asp Glu Leu Asp Asp Gly Asp Arg Asp Gln Asp	Ile		
945	950	955	

&lt;210&gt; 68

&lt;211&gt; 1139

&lt;212&gt; PRT

&lt;213&gt; Caenorhabditis elegans

&lt;400&gt; 68

Met Ser Tyr Ser Asn Gly Asn Ile Asn Cys Asp Ile Met Pro Thr Ile			
1	5	10	15
Ser Glu Asp Gly Val Asp Asn Gly Gly Pro Ile Asp Glu Pro Ser Asp			
20	25	30	
Arg Asp Asn Ile Glu Gln Leu Met Met Asn Met Leu Glu Asp Arg Asp			
35	40	45	
Lys Leu Gln Glu Gln Leu Glu Asn Tyr Lys Val Gln Leu Glu Asn Ala			
50	55	60	
Gly Leu Arg Thr Lys Glu Val Glu Lys Glu Arg Asp Met Met Lys Arg			
65	70	75	80
Gln Phe Glu Val His Thr Gln Asn Leu Pro Gln Glu Leu Gln Thr Met			
85	90	95	
Thr Arg Glu Leu Cys Leu Leu Lys Glu Gln Leu Leu Glu Lys Asp Glu			
100	105	110	
Glu Ile Val Glu Leu Lys Ala Glu Arg Asn Asn Thr Arg Leu Leu Leu			
115	120	125	
Glu His Leu Glu Cys Leu Val Ser Arg His Glu Arg Ser Leu Arg Met			
130	135	140	
Thr Val Met Lys Arg Gln Ala Gln Asn His Ala Gly Val Ser Ser Glu			
145	150	155	160
Val Glu Val Leu Lys Ala Leu Lys Ser Leu Phe Glu His His Lys Ala			
165	170	175	
Leu Asp Glu Lys Val Arg Glu Arg Leu Arg Val Ala Met Glu Arg Val			
180	185	190	
Ala Thr Leu Glu Glu Leu Ser Thr Lys Gly Asp Glu Asn Ser Ser			
195	200	205	
Leu Lys Ala Arg Ile Ala Thr Tyr Ala Ala Glu Ala Glu Glu Ala Met			
210	215	220	
Ala Ser Asn Ala Pro Ile Asn Gly Ser Ile Ser Ser Glu Ser Ala Asn			
225	230	235	240
Arg Leu Ile Glu Met Gln Glu Ala Leu Glu Arg Met Lys Thr Glu Leu			
245	250	255	
Ala Asn Ser Leu Lys Gln Ser Thr Glu Ile Thr Thr Arg Asn Ala Glu			
260	265	270	
Leu Glu Asp Gln Leu Thr Glu Asp Ala Arg Glu Lys His Ala Ala Gln			

## 8471-010 b.txt

275	280	285
Glu Ser Ile Val Arg Leu Lys Asn Gln Ile Cys Glu	Leu Asp Ala Gln	
290	295	300
Arg Thr Asp Gln Glu Thr Arg Ile Thr Thr Phe	Glu Ser Arg Phe	Leu
305	310	315
Thr Ala Gln Arg Glu Ser Thr Cys Ile Arg Asp	Leu Asn Asp Lys	Leu
325	330	335
Glu His Gln Leu Ala Asn Lys Asp Ala Ala Val	Arg Leu Asn Glu	Glu
340	345	350
Lys Val His Ser Leu Gln Glu Arg Leu Glu Leu	Ala Glu Lys Gln	Leu
355	360	365
Ala Gln Ser Leu Lys Ala Glu Ser Leu Pro	Ser Val Glu Ala	Glu
370	375	380
Leu Gln Gln Arg Met Glu Ala Leu Thr Ala Ala	Glu Gln Lys Ser	Val
385	390	395
Ser Ala Glu Glu Arg Ile Gln Arg Leu Asp	Arg Asn Ile Gln	Glu Leu
405	410	415
Ser Ala Glu Leu Glu Arg Ala Val Gln Arg	Glu Arg Met Asn	Glu Glu
420	425	430
His Ser Gln Arg Leu Ser Ser Thr Val Asp	Lys Leu Leu Ser	Glu Ser
435	440	445
Asn Asp Arg Leu Gln Leu His Leu Lys Glu Arg	Met Gln Ala Leu	Asp
450	455	460
Asp Lys Asn Arg Leu Thr Gln Gln Leu Asp	Gly Thr Lys Lys	Ile Tyr
465	470	475
Asp Gln Ala Glu Arg Ile Lys Asp Arg	Leu Gln Arg Asp Asn	Glu Ser
485	490	495
Leu Arg Gln Glu Ile Glu Ala Leu Arg Gln Gln	Leu Tyr Asn Ala	Arg
500	505	510
Thr Ala Gln Phe Gln Ser Arg Met His Ala Ile	Pro Phe Thr His	Ala
515	520	525
Gln Asn Ile Val Gln Gln Pro Gln Ala Ser	Ile Ala Gln Gln	Ser
530	535	540
Ala Tyr Gln Met Tyr Lys Gln Gln Pro Ala	Gln Gln Tyr Gln	Thr Val
545	550	555
Gly Met Arg Arg Pro Asn Lys Gly Arg Ile	Ser Ala Leu Gln	Asp Asp
565	570	575
Pro Asn Lys Val Gln Thr Leu Asn Glu	Gln Glu Trp Asp Arg	Leu Gln
580	585	590
Gln Ala His Val Leu Ala Asn Val Gln Gln	Ala Phe Ser Ser	Ser Pro
595	600	605
Ser Leu Ala Asp Val Gly Gln Ser Thr Leu	Pro Arg Pro Asn	Thr Ala
610	615	620
Val Gln His Gln Gln Asp Asp Met Met Asn	Ser Gly Met Gly	Met Pro
625	630	635
Ser Gly Met Gln Gly Gly Met Gln Gly	Gly Met Gly	Gly Gln Asp
645	650	655
Ala Gln Met Leu Ala Ser Met Leu Gln Asp	Arg Leu Asp Ala	Ile Asn
660	665	670
Thr Glu Ile Arg Leu Ile Gln Gln Glu	Lys His His Ala	Glu Arg Val
675	680	685
Ala Glu Gln Leu Glu Arg Ser Ser Arg	Glu Phe Tyr Asp Asp	Gln Gly
690	695	700

## 8471-010 b.txt

Ile Ser Thr Arg Ser Ser Pro Arg Ala Ser Pro Gln Leu Asp Asn Met  
 705 710 715 720  
 Arg Gln His Lys Tyr Asn Thr Leu Pro Ala Asn Val Ser Gly Asp Arg  
 725 730 735  
 Arg Tyr Asp Ile Tyr Gly Asn Pro Gln Phe Val Asp Asp Arg Met Val  
 740 745 750  
 Arg Asp Leu Asp Tyr Glu Pro Arg Arg Gly Tyr Asn Gln Phe Asp Glu  
 755 760 765  
 Met Gln Tyr Glu Arg Asp Arg Met Ser Pro Ala Ser Ser Val Ala Ser  
 770 775 780  
 Ser Thr Asp Gly Val Leu Gly Gly Lys Lys Arg Ser Asn Ser Ser  
 785 790 795 800  
 Ser Gly Leu Lys Thr Leu Gly Arg Phe Phe Asn Lys Lys Lys Asn Ser  
 805 810 815  
 Ser Ser Asp Leu Phe Lys Arg Asn Gly Asp Tyr Ser Asp Gly Glu Gln  
 820 825 830  
 Ser Gly Thr Glu Gly Asn Gln Lys Ala Asp Tyr Asp Arg Arg Lys Lys  
 835 840 845  
 Lys Lys His Glu Leu Leu Glu Ala Met Lys Ala Arg Thr Pro Phe  
 850 855 860  
 Ala Leu Trp Asn Gly Pro Thr Val Val Ala Trp Leu Glu Leu Trp Val  
 865 870 875 880  
 Gly Met Pro Ala Trp Tyr Val Ala Ala Cys Arg Ala Asn Val Lys Ser  
 885 890 895  
 Gly Ala Ile Met Ser Ala Leu Ser Asp Gln Glu Ile Gln Lys Glu Ile  
 900 905 910  
 Gly Ile Ser Asn Pro Leu His Arg Leu Lys Leu Arg Leu Ala Ile Gln  
 915 920 925  
 Glu Met Val Ser Leu Thr Ser Pro Ser Ala Pro Arg Thr Ala Arg Leu  
 930 935 940  
 Thr Leu Ala Phe Gly Asp Met Asn His Glu Tyr Ile Gly Asn Asp Trp  
 945 950 955 960  
 Leu Pro Cys Leu Gly Leu Ala Gln Tyr Arg Ser Ala Phe Met Glu Cys  
 965 970 975  
 Leu Leu Asp Ala Arg Met Leu Glu His Leu Ser Lys Arg Asp Leu Arg  
 980 985 990  
 Thr His Leu Arg Met Val Asp Thr Phe His Arg Thr Ser Leu Gln Tyr  
 995 1000 1005  
 Gly Ile Met Cys Leu Lys Lys Val Asn Tyr Asp Lys Lys Val Leu Ala  
 1010 1015 1020  
 Asp Arg Arg Lys Ala Cys Asp Asn Ile Asn Thr Asp Leu Leu Val Trp  
 1025 1030 1035 1040  
 Ser Asn Glu Arg Val Gln Arg Trp Val Glu Glu Ile Gly Leu Gly Val  
 1045 1050 1055  
 Phe Ser Arg Asn Leu Val Asp Ser Gly Ile His Gly Ala Leu Ile Ala  
 1060 1065 1070  
 Leu Asp Glu Thr Phe Asp Ala Ser Ala Phe Ala Tyr Ala Leu Gln Ile  
 1075 1080 1085  
 Gly Ser Gln Asp Val Pro Asn Arg Gln Leu Leu Glu Lys Lys Phe Ile  
 1090 1095 1100  
 Gly Leu Val Asn Asp His Arg Gln Gln Ser Asp Pro His Pro Arg Ser  
 1105 1110 1115 1120  
 Gly Ser Ser Arg Lys Asn Asp Ser Ile Ala Lys Ser Tyr Glu Phe His

1125

1130

1135

Leu Tyr Thr

<210> 69  
<211> 950  
<212> PRT  
<213> *Caenorhabditis elegans*

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Leu Pro Glu Asp Thr Leu Thr Val Ser Ser Ser Gln Asn Ser His Ile  
20 25 30  
Asp Ala Phe Ala Ala Leu Val Asp Arg Glu Arg Asp Ser Ser Arg Ser  
35 40 45  
Ser Gly Ser Gly Asn Ile Phe Lys Asp Asn Gly Ser Ile Lys Arg Arg  
50 55 60  
Gln Ala Leu Pro Tyr Val Thr His Tyr Ser Asp Ser Gly Phe Gly Ser  
65 70 75 80  
Ala Pro Ser Ala Gly Ser Ser Cys Ser Tyr Leu Pro Pro Pro Pro  
85 90 95  
Tyr Arg Met Arg Gly Ser Gly Gly Leu Ser Ser Lys Pro Gln His Lys  
100 105 110  
Ile His Arg Ser Leu Ser Asp Ser Lys Tyr Thr Ala Ser Leu Met Thr  
115 120 125  
Thr Gly Val Pro Thr Leu Pro Leu Leu Ser Met Thr Pro Phe Asn Gln  
130 135 140  
Leu Gln Ser Arg Asp Ala Arg Gly Ala Ser Trp Ile Ser Leu Val Arg  
145 150 155 160  
Ala Pro Asn Phe His Leu Tyr Cys Phe Phe Val Phe Phe Phe Ser Phe  
165 170 175  
Asn Ile Asp Glu Thr Phe Arg Asn Ser Asn Ile Ser Ser Pro Ser Pro  
180 185 190  
Ser Met Ser Thr Val Ser Cys Pro Glu Tyr Pro Glu Leu Gln Asp Lys  
195 200 205  
Leu His Arg Leu Ala Met Ala Arg Asp Ser Leu Gln Leu Gln Val Ser  
210 215 220  
Val Leu Ser Glu Gln Val Gly Ala Gln Lys Glu Lys Ile Lys Asp Leu  
225 230 235 240  
Glu Thr Val Ile Ala Leu Lys Arg Asn Asn Leu Thr Ser Thr Glu Glu  
245 250 255  
Leu Leu Gln Asp Lys Tyr His Arg Ile Asp Glu Cys Gln Glu Leu Glu  
260 265 270  
Ser Lys Lys Met Asp Leu Leu Ala Glu Val Ser Ser Leu Lys Leu Arg  
275 280 285  
Tyr Ala Thr Leu Glu Arg Glu Lys Asn Glu Thr Glu Lys Lys Leu Arg  
290 295 300  
Leu Ser Gln Asn Glu Met Asp His Val Asn Gln Ser Met His Gly Met  
305 310 315 320  
Val Val Gln Gln Gln Leu Ala His His Thr Asn Gly His Ser Ser Gly  
325 330 335  
Gly Tyr Met Ser Pro Leu Arg Glu His Arg Ser Glu Lys Asn Asp Asp

## 8471-010 b.txt

340	345	350
Glu Met Ser Gln Leu Arg Thr Ala Val Gln Arg Leu Met Ala Asp Asn		
355	360	365
Glu His Lys Ser Leu Gln Ile Asn Thr Leu Arg Asn Ala Leu Asp Glu		
370	375	380
Gln Met Arg Ser Arg Ser Gln Gln Glu Asp Phe Tyr Ala Ser Gln Arg		
385	390	395
Asn Tyr Thr Asp Asn Phe Asp Val Asn Ala Gln Ile Arg Arg Ile Leu		
405	410	415
Met Asp Glu Pro Ser Asp Ser Met Ser His Ser Thr Ser Phe Pro Val		
420	425	430
Ser Leu Ser Ser Thr Thr Ser Asn Gly Lys Gly Pro Arg Ser Thr Val		
435	440	445
Gln Ser Ser Ser Tyr Asn Ser Ser Leu Ser Ala Val Ser Pro Gln		
450	455	460
His Asn Trp Ser Ser Ala Gly Ala Gly Thr Pro Arg Gln Leu His Pro		
465	470	475
Ile Gly Gly Asn Gln Arg Val Asn Asn Ile Thr Ser Ala Gln Tyr Cys		
485	490	495
Ser Pro Ser Pro Pro Ala Ala Arg Gln Leu Ala Ala Glu Leu Asp Glu		
500	505	510
Leu Arg Arg Asn Gly Asn Glu Gly Ala Asn His Asn Tyr Ser Ser Ala		
515	520	525
Ser Leu Pro Arg Gly Val Gly Lys Ala Ser Ser Thr Leu Thr Leu Pro		
530	535	540
Ser Lys Lys Leu Ser Val Ala Ser Gly Thr Ser Val Val Glu Ser Asp		
545	550	555
Asp Glu Ile Ala Arg Gly Arg Asn Leu Asn Asn Ala Thr Ser Gln Ser		
565	570	575
Asn Leu Lys Asn Phe Ser Arg Glu Arg Thr Arg Ser Ser Leu Arg Asn		
580	585	590
Ile Phe Ser Lys Leu Thr Arg Ser Thr Ser Gln Asp Gln Ser Asn Ser		
595	600	605
Phe Arg Arg Gly Ser Ala Ala Arg Ser Thr Ser Thr Ala Arg Leu Gly		
610	615	620
Ser Thr Asn His Leu Gly Thr Val Ser Lys Arg Pro Pro Leu Ser Gln		
625	630	635
Phe Val Asp Trp Arg Ser Glu Gln Leu Ala Asp Trp Ile Ala Glu Ile		
645	650	655
Gly Tyr Pro Gln Tyr Met Asn Glu Val Ser Arg His Val Arg Ser Gly		
660	665	670
Arg His Phe Leu Asn Met Ser Met Asn Glu Tyr Glu Gly Val Leu Asn		
675	680	685
Ile Lys Asn Pro Val His Arg Lys Arg Val Ala Ile Leu Leu Arg Arg		
690	695	700
Ile Glu Glu Asp Ile Met Glu Pro Ala Asn Lys Trp Asp Val His Gln		
705	710	715
Thr Leu Arg Trp Leu Asp Asp Ile Gly Leu Pro Gln Tyr Lys Asp Val		
725	730	735
Phe Ala Glu Asn Val Val Asp Gly Pro Leu Leu Ser Leu Thr Ala		
740	745	750
Asn Asp Ala Val Glu Met Lys Val Val Asn Ala His His Tyr Ala Thr		
755	760	765

## 8471-010 b.txt

Leu Ala Arg Ser Ile Gln Phe Leu Lys Lys Ala Asp Phe Arg Phe Asn  
 770 775 780  
 Ala Met Glu Lys Leu Ile Asp Gln Asn Ile Val Glu Lys Tyr Pro Cys  
 785 790 795 800  
 Pro Asp Val Val Val Arg Trp Thr His Ser Ala Thr Cys Glu Trp Leu  
 805 810 815  
 Arg Lys Ile Asp Leu Ala Glu Phe Thr Gln Asn Leu Leu Phe Ala Gly  
 820 825 830  
 Val Pro Gly Ala Leu Met Ile Tyr Glu Pro Ser Phe Thr Ala Glu Ser  
 835 840 845  
 Leu Ala Glu Ile Leu Gln Met Pro Pro His Lys Thr Leu Leu Arg Arg  
 850 855 860  
 His Leu Thr Ser His Phe Asn Gln Leu Leu Gly Pro Lys Ile Ile Ala  
 865 870 875 880  
 Asp Lys Arg Asp Phe Leu Ala Ala Gly Asn Tyr Pro Gln Ile Ser Pro  
 885 890 895  
 Thr Gly Arg Val Lys Val Val Lys Lys Gly Phe Ser Leu Thr Arg Lys  
 900 905 910  
 Lys Ala Lys Asn Glu Ile Cys Leu Glu Pro Glu Glu Leu Leu Cys Pro  
 915 920 925  
 Gln Val Leu Val His Lys Tyr Pro Thr Gly Ala Gly Asp Asn Ser Ser  
 930 935 940  
 Phe Glu Ser Ser Asn Val  
 945 950

&lt;210&gt; 70

&lt;211&gt; 15

&lt;212&gt; PRT

&lt;213&gt; human rhinovirus 2

&lt;400&gt; 70

Val Lys Ala Glu Thr Arg Leu Asn Pro Asp Leu Gln Pro Thr Glu  
 1 5 10 15

&lt;210&gt; 71

&lt;211&gt; 24

&lt;212&gt; PRT

&lt;213&gt; human immunodeficiency virus type 1

&lt;220&gt;

&lt;221&gt; VARIANT

&lt;222&gt; 14

&lt;223&gt; Xaa = Any Amino Acid

&lt;400&gt; 71

Tyr Asn Lys Arg Lys Arg Ile His Ile Gly Pro Gly Arg Xaa Phe Tyr  
 1 5 10 15

Thr Thr Lys Asn Ile Ile Gly Cys  
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&lt;210&gt; 72

&lt;211&gt; 8

&lt;212&gt; PRT

8471-010 b.txt

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Gly Thr Ser Ser Pro Ser Ala Asp  
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<213> Mesocricetus auratus

<400> 73

Ala Pro Lys Thr Asn Met Lys His Met Ala  
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<210> 74

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<212> PRT

<213> Foot-and-mouth disease virus

<400> 74

Tyr Thr Thr Ser Thr Arg Gly Asp Leu Ala His Val Thr Thr Thr  
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<210> 75

<211> 18

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<213> Human poliovirus 1 Mahoney

<400> 75

Cys Val Thr Ile Met Thr Val Asp Asn Pro Ala Ser Thr Thr Asn Lys  
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## 8471-010 b.txt

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Lys Pro Ala Thr Gly			
50			

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Arg			

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Phe His Gly Glu Val Val Arg			
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8471-010 b.txt

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8471-010 b.txt

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Page 115

8471-010 b.txt

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8471-010 b.txt

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8471-010 b.txt

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8471-010 b.txt

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A to  
fold back on itself to form the triple helix

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elements

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7

<210> 145  
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g  
elements

<220>  
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<223> n = residue with no base, essentially glycines that allow the DN  
A to  
fold back on itself to form the triple helix

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18

<210> 146  
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<212> DNA  
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g  
elements

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8471-010 b.txt

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<220>  
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<222> 8, 9, 10, 11  
<223> n = residue with no base, essentially glycines that allow the DNA to fold back on itself to form the triple helix

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8471-010 b.txt

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<220>  
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8471-010 b.txt

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<210> 155  
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<220>  
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<400> 155  
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<210> 156  
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8471-010 b.txt

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<212> PRT  
<213> Avian sarcoma virus 17

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<400> 160  
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<210> 161  
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1 5 10 15

<210> 162  
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<213> Human herpes virus type 1

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Gln Pro Glu Leu Ala Pro Glu Asp Pro Glu Asp  
1 5 10

<210> 163  
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1 5 10

<210> 164  
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8471-010 b.txt

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<210> 166  
<211> 5  
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<220>  
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<210> 167  
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<220>  
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<400> 167  
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1 5

<210> 168  
<211> 15  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Derived from S-peptide fragment of ribonuclease A protein, proba  
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8471-010 b.txt

bly  
from Bos taurus.

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Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln His Met Asp Ser  
1 5 10 15

<210> 169  
<211> 5  
<212> PRT  
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<220>  
<223> Derived from a consensus recognition sequence of cAMP-dependent protein kinase (protein kinase A).

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<220>  
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<210> 171  
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<212> PRT  
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<220>  
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<400> 172

8471-010 b.txt

Ala Gln Asn Pro Ser Asp Asn Asn Thr His Thr His  
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<210> 173

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<212> PRT

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<223> Identified from M13 bacteriophage peptide display library.

<400> 173

Ala Ser Ser Ser Arg Ser His Phe Gly Gln Thr Asp  
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<210> 174

<211> 12

<212> PRT

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